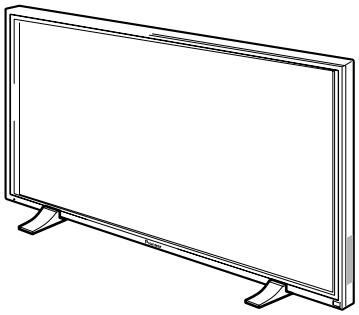
Pioneer sound.vision.soul

Service Manual



ORDER NO.
ARP3123

PLASMA DISPLAY

PDP-433CMX
PDP-433MXE

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model		Power Requirement	Remarks
	PDP-433CMX	PDP-433MXE		
LUCBW	○	–	AC100 - 120V	
YVLDK	–	○	AC100 - 240V	

For details, refer to "Important symbols for good services".

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SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

■ SAFETY PRECAUTIONS

NOTICE :Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis.

The following precautions should be observed :

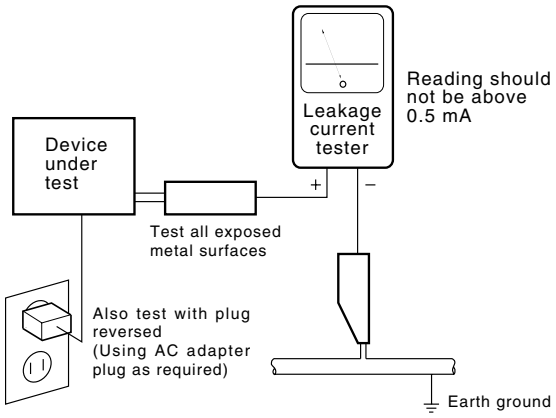
1. When service is required, even though the PDP UNIT an isolation transformer should be inserted between the power line and the set in safety before any service is performed.
2. When replacing a chassis in the set, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
3. When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
4. Always use the manufacture's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's.
   Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
5. Before returning a serviced set to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the set by the manufacture has become defective, or inadvertently defeated during servicing. Therefore, the following checks should be performed for the continued protection of the customer and service technician.
6. Perform the following precautions against unwanted radiation and rise in internal temperature.
   - Always return the internal wiring to the original styling.
   - Attach parts (Gascket, Ferrite Core, Ground, Rear Cover, Shield Case etc.) surely after disassembly.
7. Perform the following precautions for the PDP panel.
   - When the front case is removed, make sure nothing hits the panel face, panel corner, and panel edge (so that the glass does not break).
   - Make sure that the panel vent does not break. (Check that the cover is attached.)
   - Handle the FPC connected to the panel carefully.
     Twisting or pulling the FPC when connecting it to the connector will cause it to peel off from the panel.
8. Pay attention to the following.
   - Be sure to wire the fan. If the fan does not work, the temperature will rise and cause the protection circuit to operate.
   - When the front case is removed, infrared ray is radiated and may disturb reception of the remote control unit.
   - Pay extreme caution when the front case and rear panel are removed because this may cause a high risk of disturbance to TVs and radios in the surrounding.

Leakage Current Cold Check

With the AC plug removed from an AC power source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (input/output terminals, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of 0.3MΩ and a maximum resistor reading of 5MΩ. Any resistor value below or above this range indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into an AC power source (do not use an isolation transformer for this check).
Turn the AC power switch on.
Using a "Leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (input/output terminals, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5mA.


Reading should not be above 0.5 mA
Leakage current tester
Device under test
+
–
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE SET TO THE CUSTOMER.

■ PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in PIONEER set have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.
Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire or other hazards.
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

■ CHARGED SECTION AND HIGH VOLTAGE GENERATING POINT

■ Charged Section

The places where the commercial AC power is used without passing through the power supply transformer.
If the places are touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply. Therefore, be sure to connect the set via an insulated transformer and supply the current.

1. AC Power Cord
2. AC Inlet with Filter
3. Power Switch (S1)
4. Fuse (In the SW POWER SUPPLY Module)
5. STB Transformer and Converter Transformer (In the SW POWER SUPPLY Module)
6. Other primary side of the SW POWER SUPPLY Module

■ High Voltage Generating Point

The places where voltage is 100V or more except for the charged places described above. If the places are touched, there is a risk of electric shock.

1. SW POWER SUPPLY Module ..... (215V)
2. X DRIVE Assy ..... (–280V to 215V)
3. Y DRIVE Assy ..... (345V)
4. SCAN (A) Assy ..... (345V)
5. SCAN (B) Assy ..... (345V)
6. X CONNECTOR (A) Assy ..... (–280V to 215V)
7. X CONNECTOR (B) Assy ..... (–280V to 215V)

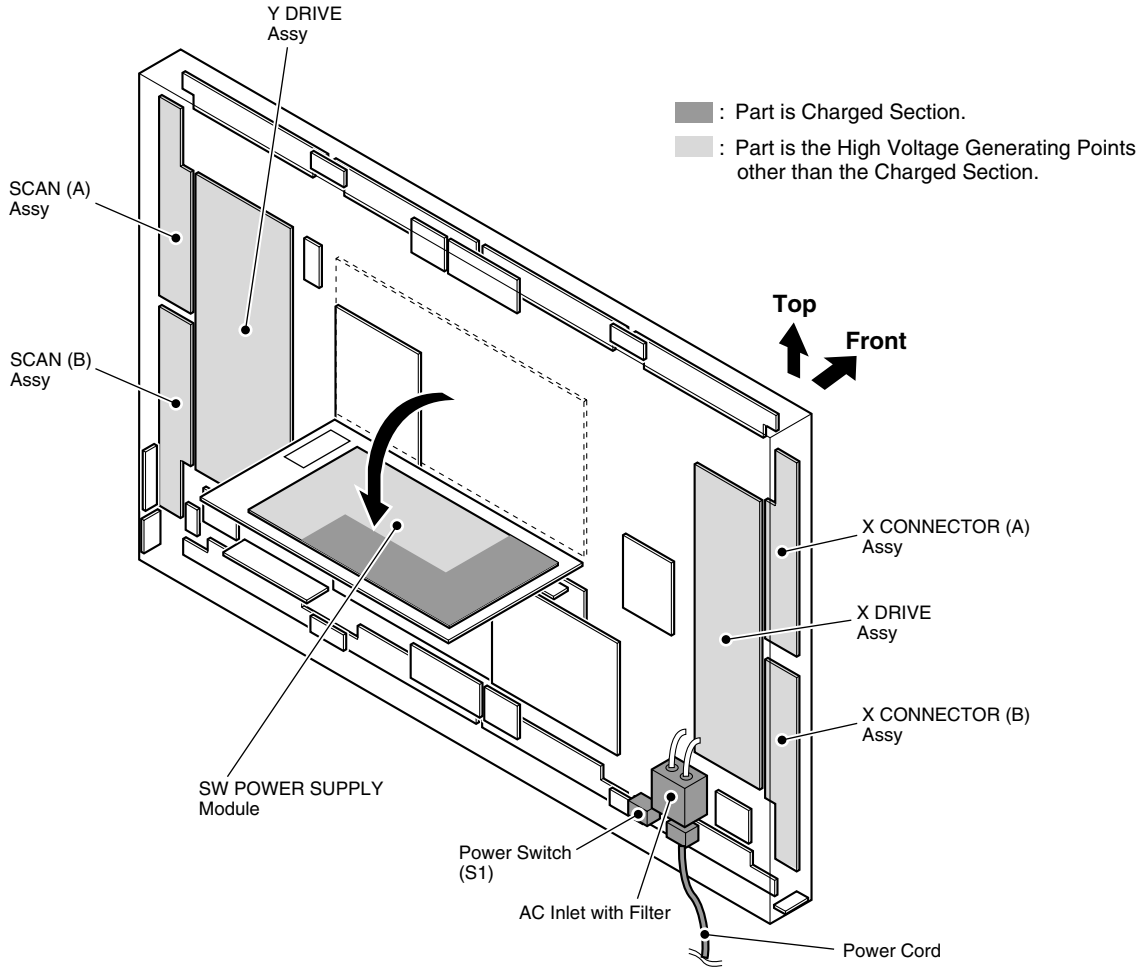


Fig.1 Charged Section and High Voltage Generating Point (Rear View)

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

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1. SPECIFICATIONS

■ PLASMA DIAPLAY (PDP-433CMX and PDP-433MXE)

General

Light emission panel ..... 43 inch plasma display panel
Number of pixels ..... 1024 x 768
Power supply .... AC 100 - 120 V, 50/60 Hz (PDP-433CMX)
Power supply .... AC 100 - 240 V, 50/60 Hz (PDP-433MXE)
Rated current ..... 2.98 A - 2.48 A (PDP-433CMX)
Rated current ..... 2.98 A - 1.24 A (PDP-433MXE)
Standby power consumption ..... 0.9 W (PDP-433CMX)
Standby power consumption ..... 1 W (PDP-433MXE)
External dimensions ..... 1070 (W) x 630 (H) x 98 (D) mm
..... 42-1/8 (W) x 24-13/16 (H) x 3-7/8 (D) in.
(including display stand)
..... 1070 (W) x 653 (H) x 300 (D) mm
..... 42-1/8 (W) x 25-23/32 (H) x 11-13/16 (D) in.
Weight ..... 31.5 kg (69 lbs. 7 oz)
(including display stand) ..... 32.1 kg (70 lbs. 12 oz)

Input/output

Video

INPUT 1

(Input) Mini D-sub 15 pin (socket connector)
RGB signal (G ON SYNC compatible)
RGB ... 0.7 Vp-p/75 Ω/no sync.
HD/CS, VD ... TTL level
/positive and negative polarity
/2.2 kΩ
G ON SYNC
... 1 Vp-p/75 Ω/negative sync.
*Compatible with Microsoft's Plug & Play (VESA DDC1/2B)

(Output) Mini D-sub 15 pin (socket connector)
75 Ω/with buffer

INPUT 2

(Input) BNC jack (x5)
RGB signal (G ON SYNC compatible)
RGB ... 0.7 Vp-p/75 Ω/no sync.
HD/CS, VD ... TTL level
/positive and negative polarity/
75 Ω or 2.2 kΩ
(impedance switch)
G ON SYNC ...
1 Vp-p/75 Ω/negative sync.

Audio

(Input) AUDIO INPUT (for INPUT 1/2)
Stereo mini jack
L/R ... 500mVrms/more than 10 kΩ

(Output) AUDIO OUTPUT
Stereo mini jack
L/R ... 500mVrms (max)/less than 5 kΩ

SPEAKER
L/R ... 8 – 16 Ω/2W +2W (at 8 Ω)

Control

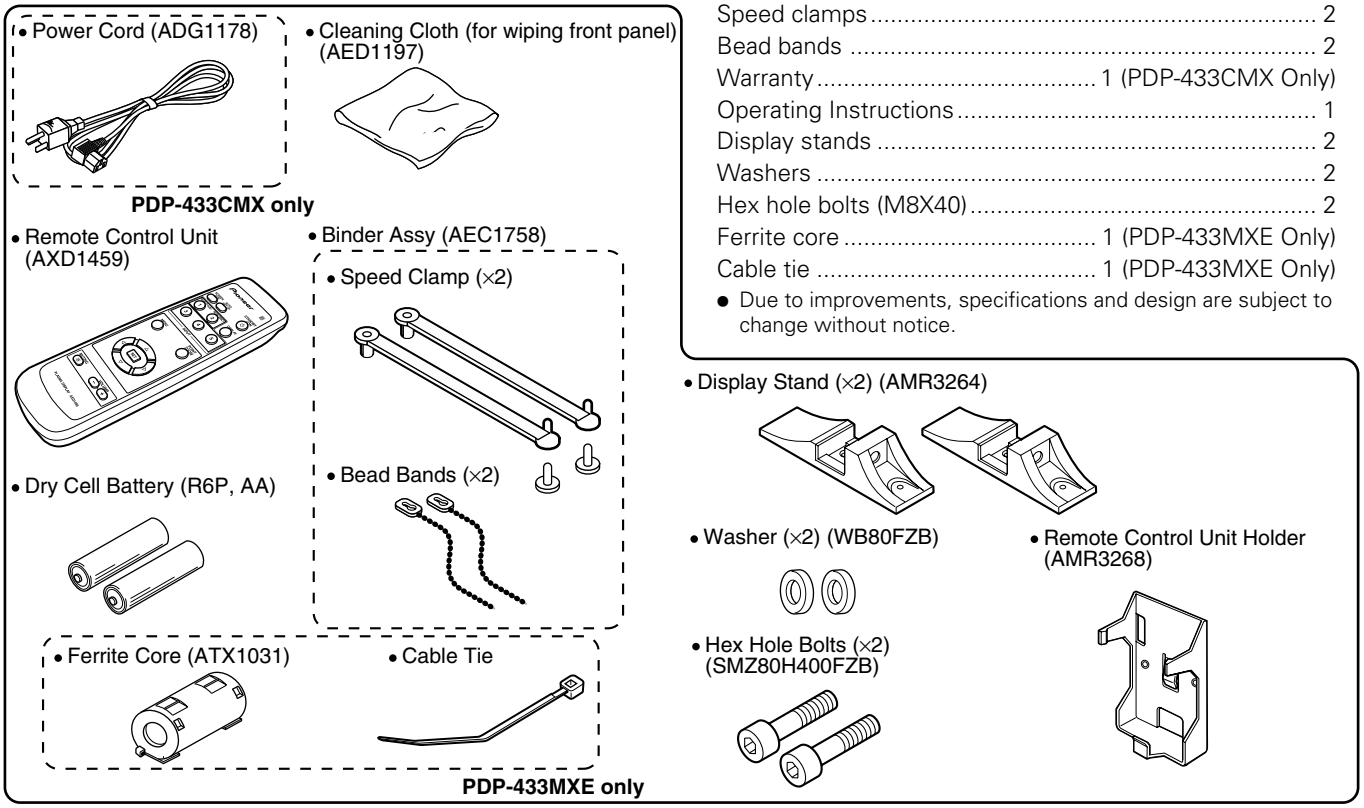
RS-232C ... D-sub 9 pin (pin connector)
COMBINATION IN/OUT
... Mini DIN 6 pin (x2)
CONTROL IN/OUT ... monaural mini jack (x2)

Accessories

Power cord ..... 1 (PDP-433CMX Only)
Remote control unit 1
Remote control unit holder 1
AA (R6) batteries 2
Cleaning cloth 1
Speed clamps 2
Bead bands 2
Warranty ..... 1 (PDP-433CMX Only)
Operating Instructions 1
Display stands 2
Washers 2
Hex hole bolts (M8X40) 2
Ferrite core ..... 1 (PDP-433MXE Only)
Cable tie ..... 1 (PDP-433MXE Only)

- Due to improvements, specifications and design are subject to change without notice.

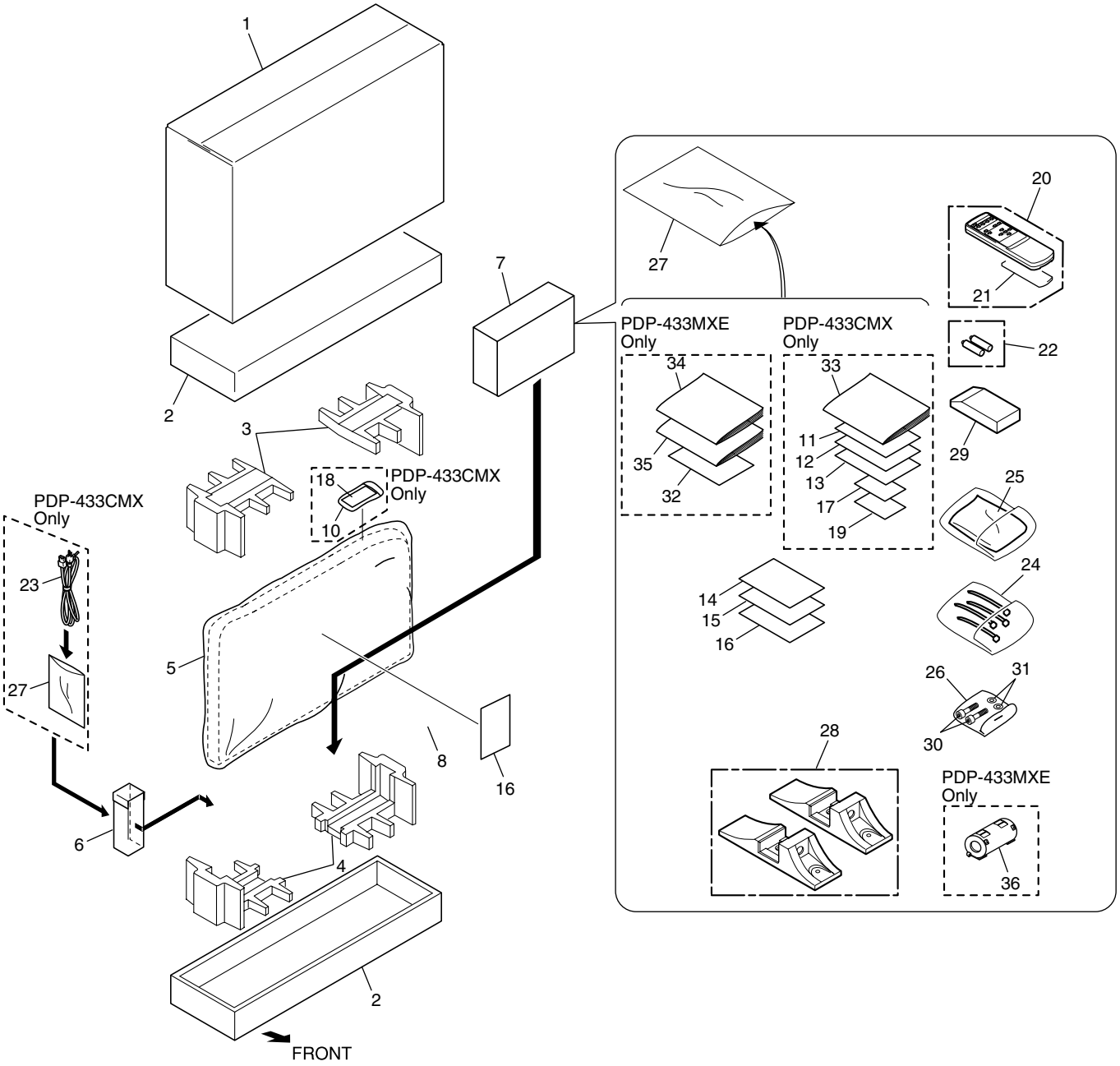
● **Accessories**


• Power Cord (ADG1178)
• Cleaning Cloth (for wiping front panel) (AED1197)
PDP-433CMX only
• Remote Control Unit (AXD1459)
• Binder Assy (AEC1758)
• Speed Clamp (×2)
• Dry Cell Battery (R6P, AA)
• Bead Bands (×2)
• Ferrite Core (ATX1031)
• Cable Tie
PDP-433MXE only
• Display Stand (×2) (AMR3264)
• Washer (×2) (WB80FZB)
• Remote Control Unit Holder (AMR3268)
• Hex Hole Bolts (×2) (SMZ80H400FZB)

2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on the product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING



(1) PACKING PARTS LIST

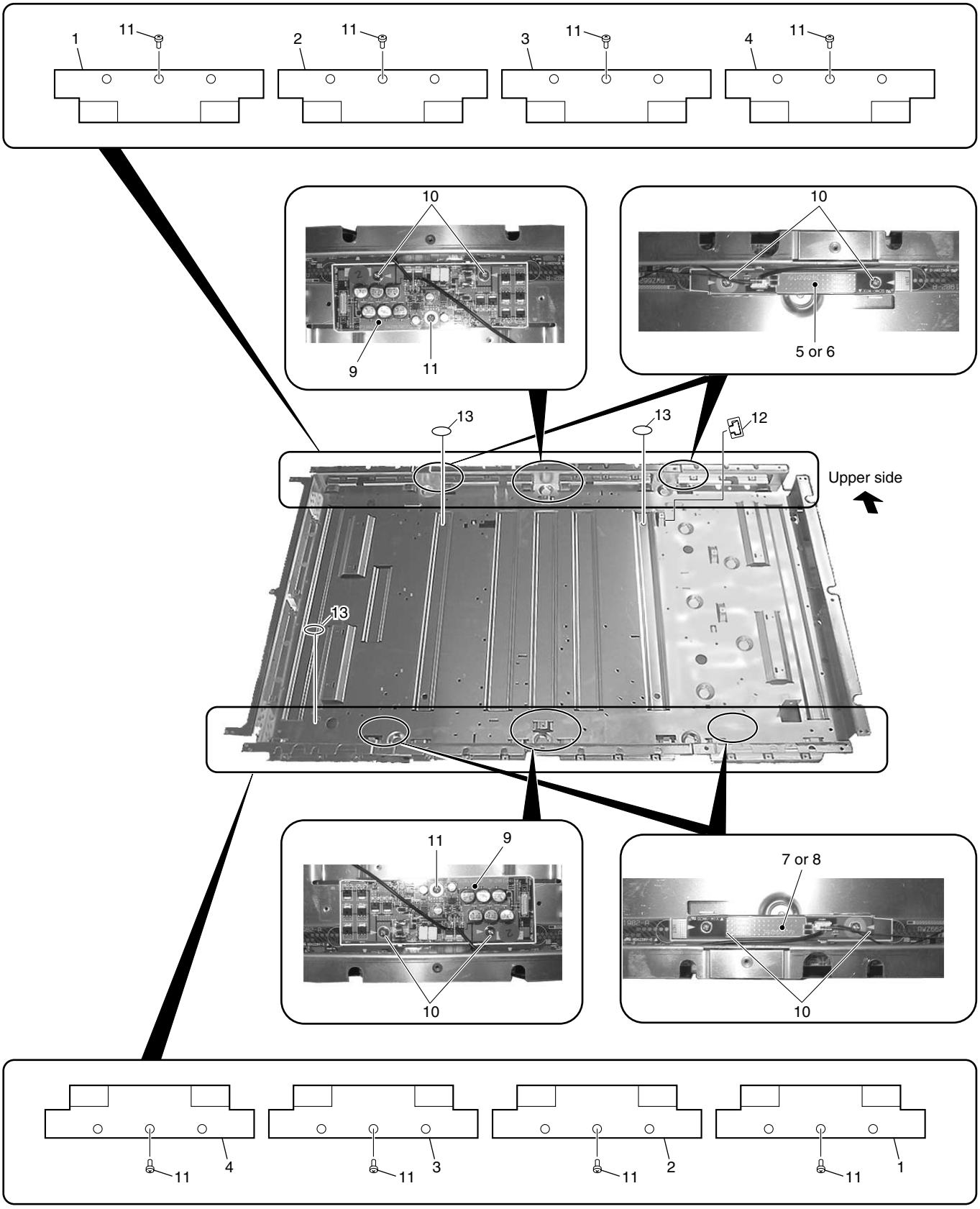
Mark	No.	Description	Part No.
	1	Packing Case	See Contrast table (2)
	2	Carton (43)	AHD3100
	3	Pad (43U)	AHA2282
	4	Pad (43L)	AHA2283
	5	Mirror Mat	AHG1284
	6	Power Cord Case	AHC1037
	7	Accessory Case	AHC1036
	8	•••••	
	9	•••••	
NSP	10	Polyethylene Bag	See Contrast table (2)
	11	Plasma Caution Sheet	See Contrast table (2)
	12	Plasma Caution Sheet	See Contrast table (2)
	13	Caution Sheet	See Contrast table (2)
	14	Caution Sheet	ARM1194
	15	Caution Sheet	ARM1200
	16	Caution Sheet	ARM1201
	17	Caution Sheet	See Contrast table (2)
NSP	18	Warranty Card	See Contrast table (2)
NSP	19	Warranty Card	See Contrast table (2)
	20	Remote Control Unit	AXD1459
	21	Battery Cover	AZN2462
NSP	22	Dry Cell Battery (R6P, AA)	AEX1026
⚠	23	Power Cord	See Contrast table (2)
	24	Binder Assy (Speed Clamp × 2, Bead Band × 2)	AEC1758
	25	Wiping Cloth	AED1197
NSP	26	Polyethylene Bag	AHG-064
	27	Vinyl Bag	AHG1310
	28	Display Stand	AMR3264
	29	Remote Control Holder	AMR3268
	30	Hex Hole Bolt	SMZ80H400FZB
	31	Washer	WB80FZB
	32	Plasma Caution Sheet	See Contrast table (2)
	33	Operating Instructions (Japanese/English/French)	See Contrast table (2)
	34	Operating Instructions (Spanish/Italian/Dutch)	See Contrast table (2)
	35	Operating Instructions (English/French/German)	See Contrast table (2)
	36	Ferrite Core	See Contrast table (2)

(2) CONTRAST TABLE

PDP-433CMX/LUCB and PDP-433MXE/YVLDK are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			PDP-433CMX	PDP-433MXE	
			LUCB	YVLDK	
	1	Packing Case (43CMX)	AHD3130	Not used	
	1	Packing Case (43MXE)	Not used	AHD3134	
NSP	10	Polyethylene Bag	AHG-195	Not used	
	11	Plasma Caution Sheet	ARM1145	Not used	
	12	Plasma Caution Sheet	ARM1147	Not used	
	13	Caution Sheet	ARM1176	Not used	
	17	Caution Sheet	ARM1203	Not used	
NSP	18	Warranty Card	ARY1093	Not used	
NSP	19	Warranty Card	ARY1102	Not used	
⚠	23	Power Cord	ADG1178	Not used	
	32	Plasma Caution Sheet	Not used	ARM1149	
	33	Operating Instructions (Japanese/English/French)	ARD1049	Not used	
	34	Operating Instructions (Spanish/Italian/Dutch)	Not used	ARC1506	
	35	Operating Instructions (English/French/German)	Not used	ARE1361	
	36	Ferrite Core	Not used	ATX1031	

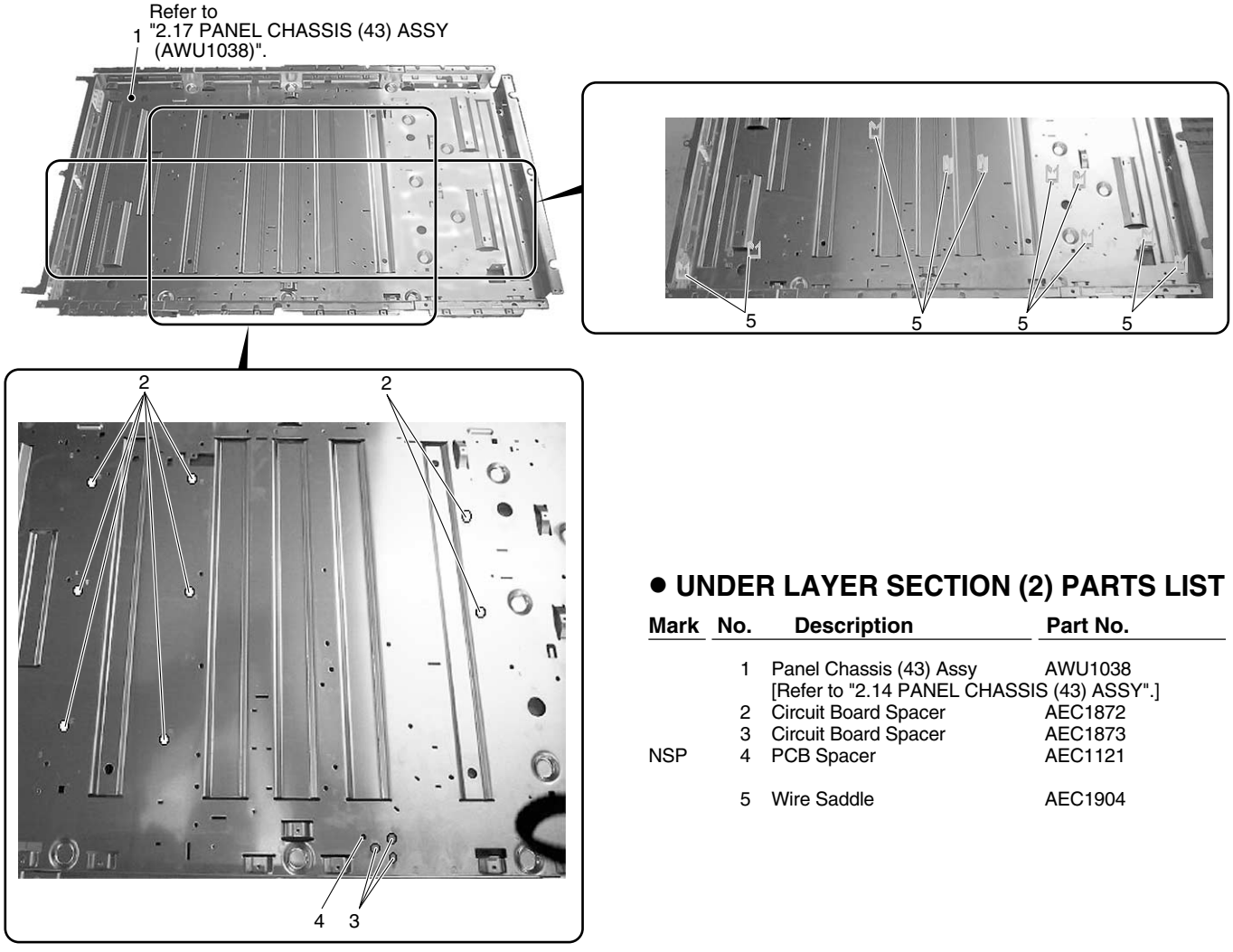
2.2 UNDER LAYER SECTION (1)



● UNDER LAYER SECTION (1) PARTS LIST

Mark	No.	Description	Part No.
NSP	1	ADR CONNECT A Assy	AWZ6678
NSP	2	ADR CONNECT B Assy	AWZ6679
NSP	3	ADR CONNECT C Assy	AWZ6680
NSP	4	ADR CONNECT D Assy	AWZ6681
NSP	5	BRIDGE A Assy	AWZ6674
NSP	6	BRIDGE B Assy	AWZ6675
NSP	7	BRIDGE C Assy	AWZ6676
NSP	8	BRIDGE D Assy	AWZ6677
NSP	9	ADR RESONANCE Assy	AWZ6682
	10	Screw	ABA1301
	11	Screw	VBB30P100FNI
	12	Shading Sheet (43)	AMR3313
	13	Rear Coner Label	AAX2862

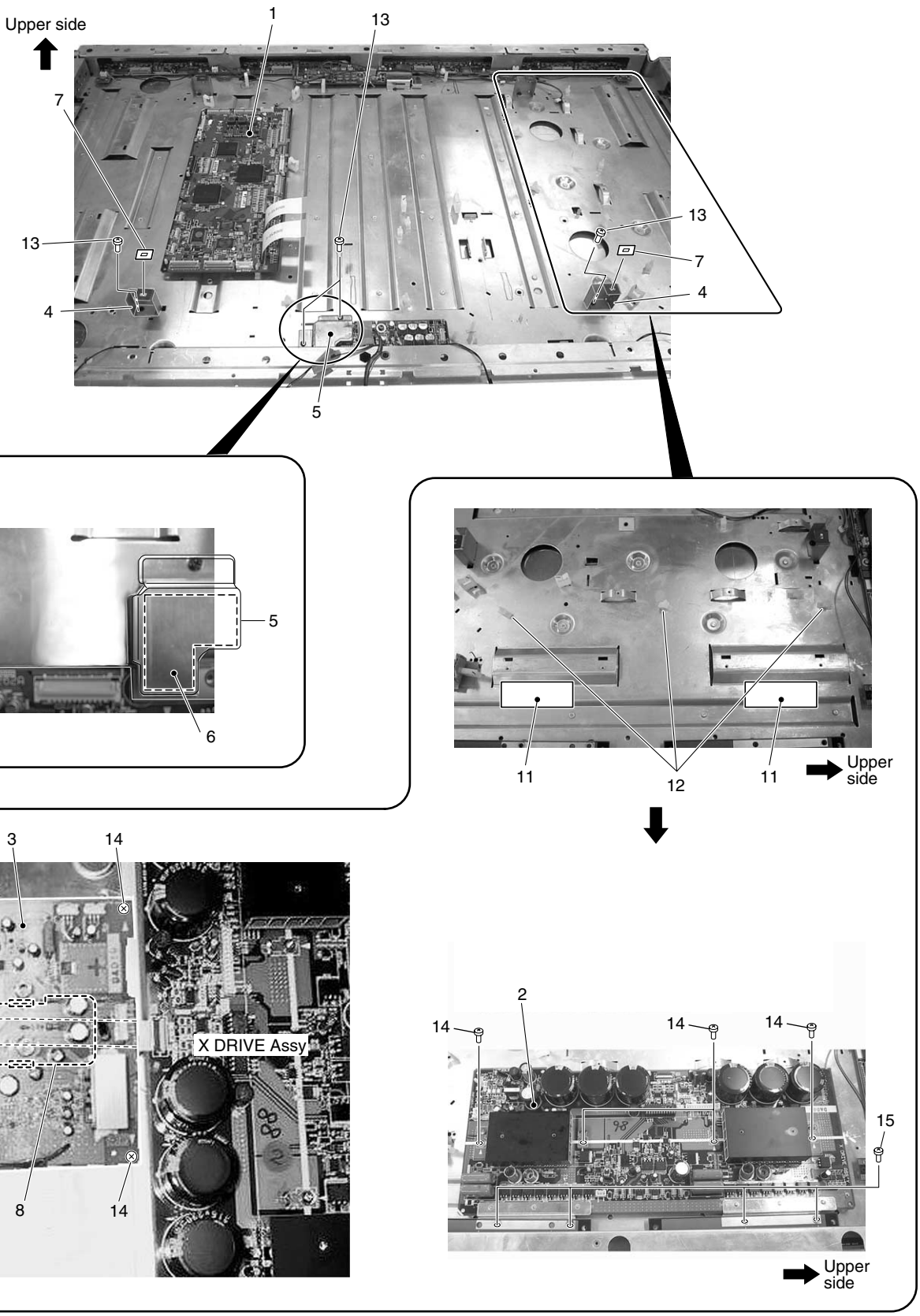
2.3 UNDER LAYER SECTION (2)



● UNDER LAYER SECTION (2) PARTS LIST

Mark	No.	Description	Part No.
	1	Panel Chassis (43) Assy [Refer to "2.14 PANEL CHASSIS (43) ASSY".]	AWU1038
	2	Circuit Board Spacer	AEC1872
	3	Circuit Board Spacer	AEC1873
NSP	4	PCB Spacer	AEC1121
	5	Wire Saddle	AEC1904

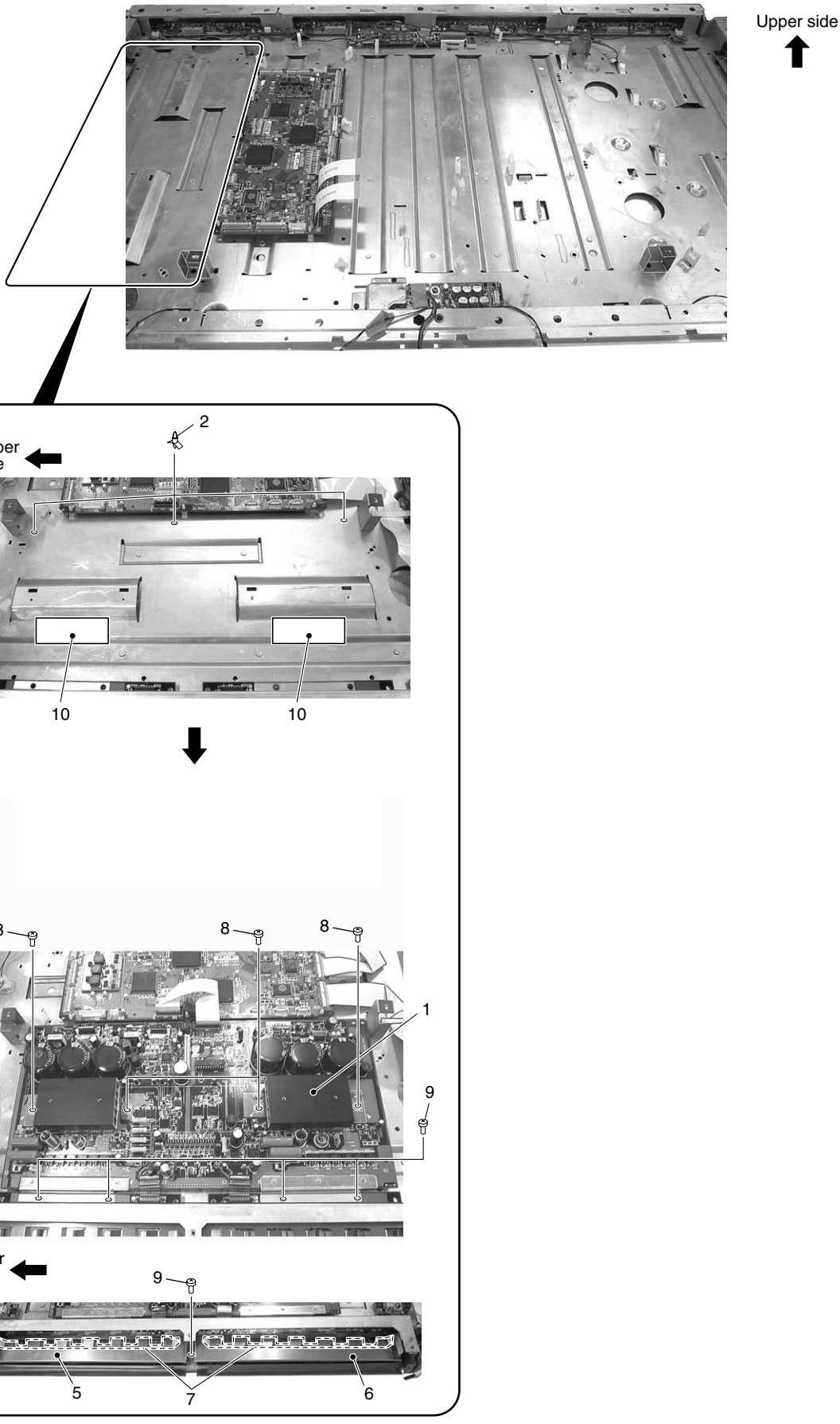
2.4 UNDER LAYER SECTION (3)



● UNDER LAYER SECTION (3) PARTS LIST

Mark	No.	Description	Part No.
	1	DIGITAL VIDEO Assy	AWV1941
	2	X DRIVE Assy	AWV1930
	3	MX AUDIO Assy	AWZ6644
NSP	4	Metal Fitting	ANG2464
NSP	5	Heat Sink	ANH1594
	6	Silicone Sheet	AEH1039
	7	Insulation Sheet	AMR3263
	8	Audio Sheet (43)	AMR3285
	9	Rivet	BEC1066
	10	•••••	
	11	Coil Silicone Sheet	AEH1048
	12	Circuit Board Spacer	AEC1872
	13	Screw	ABZ30P060FMC
	14	Screw	VBB30P100FNI
	15	Screw	PMB30P060FNI

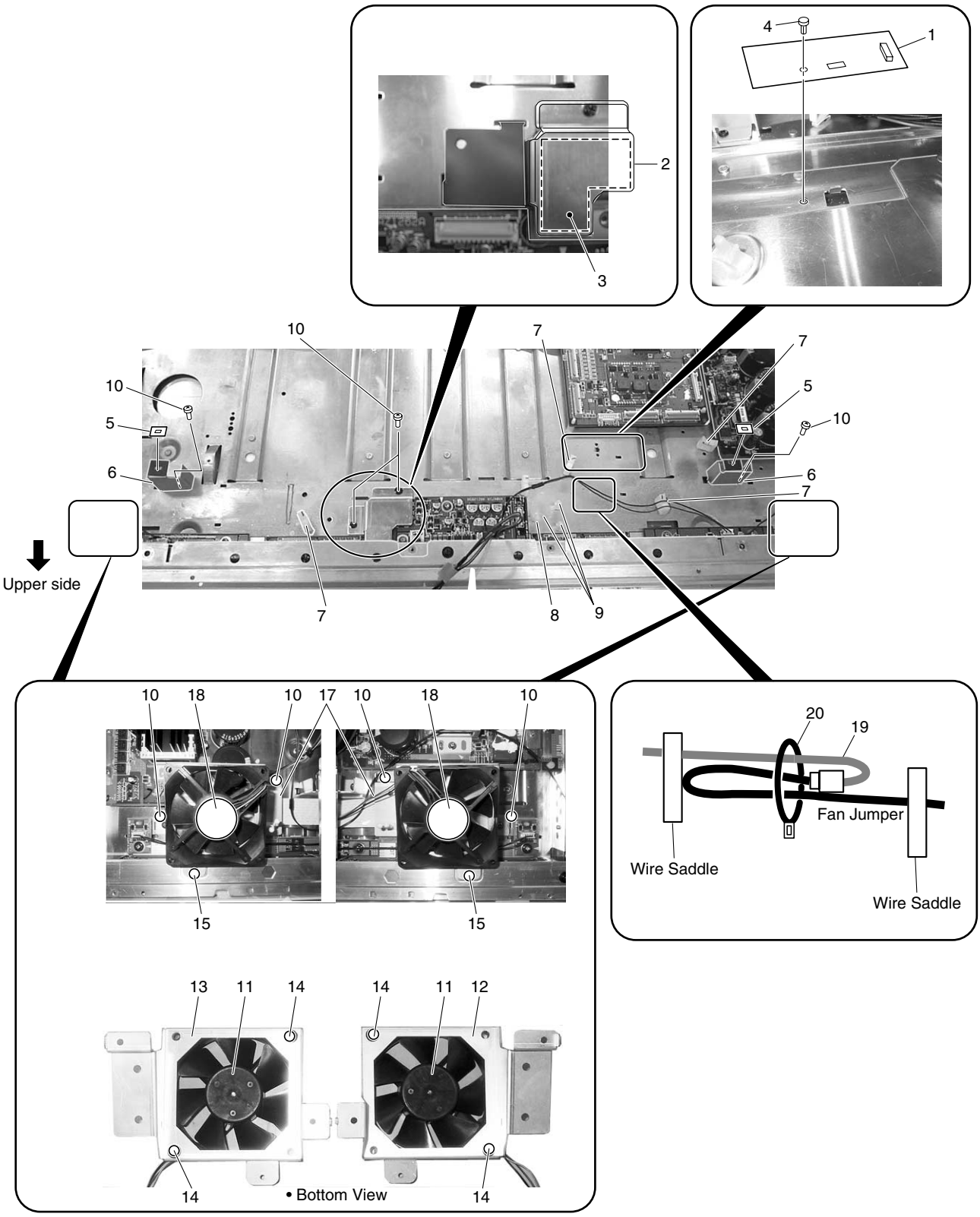
2.5 UNDER LAYER SECTION (4)



● UNDER LAYER SECTION (4) PARTS LIST

Mark	No.	Description	Part No.
	1	Y DRIVE Assy	AWZ6683
	2	Circuit Board Spacer	AEC1872
	3	•••••	
	4	•••••	
	5	Scan IC Spring (43L)	ABK1029
	6	Scan IC Spring (43R)	ABK1030
	7	Scan Insulation Sheet (43)	AMR3287
	8	Screw	VBB30P100FNI
	9	Screw	PMB30P060FNI
	10	Coil Silicone Sheet	AEH1048

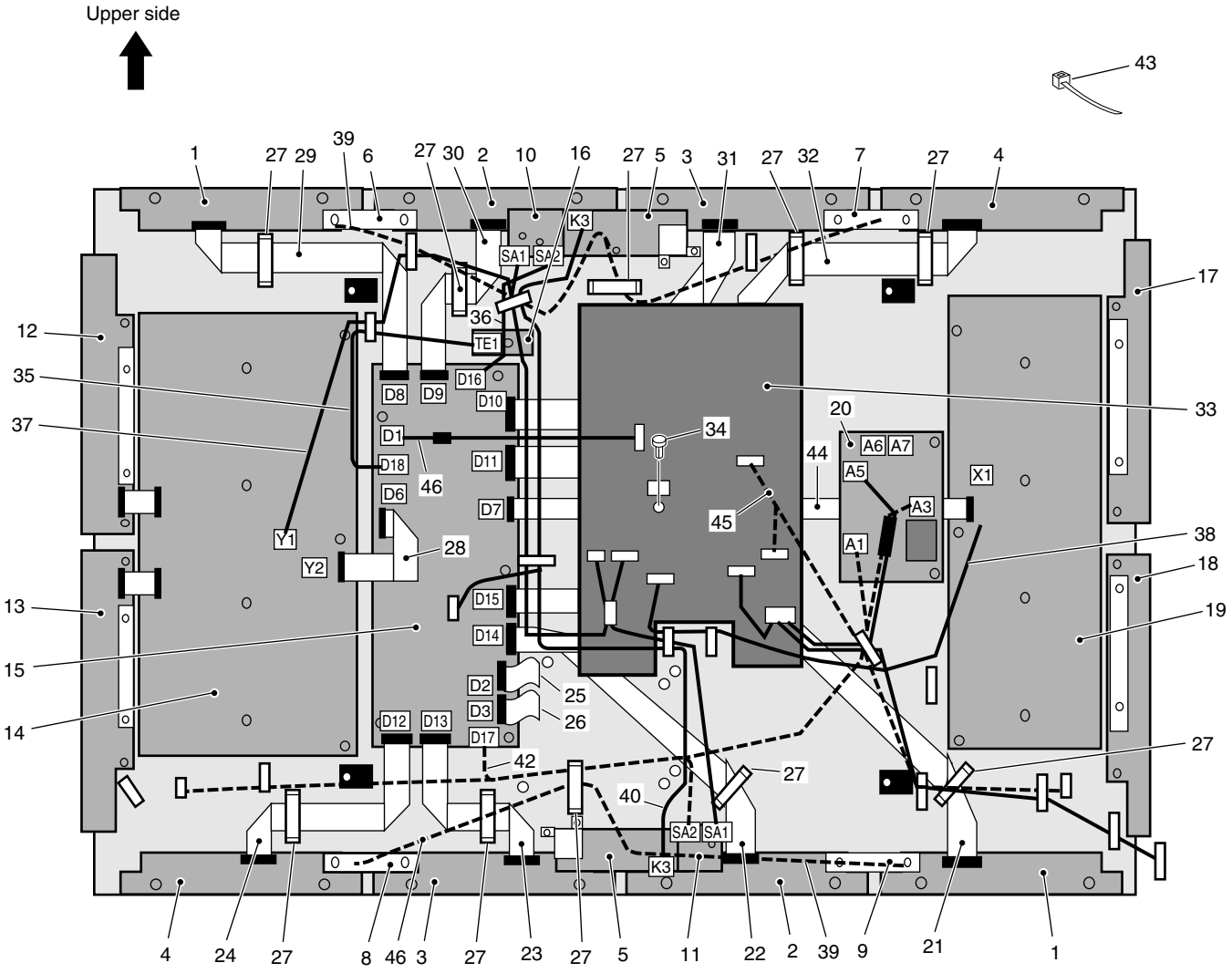
2.6 UNDER LAYER SECTION (5)



● UNDER LAYER SECTION (5) PARTS LIST

Mark	No.	Description	Part No.
	1	THERMAL SENSOR Assy	AWZ6639
NSP	2	Heat Sink	ANH1594
	3	Silicone Sheet	AEH1039
	4	Rivet	BEC1066
	5	Insulation Sheet	AMR3263
NSP	6	Metal Fitting	ANG2464
	7	Wire Saddle	AEC1904
NSP	8	PCB Spacer	AEC1121
	9	Circuit Board Spacer	AEC1873
	10	Screw	ABZ30P060FMC
	11	Fan Motor	AXM1040
NSP	12	Fan Metal (L)	ANG2488
NSP	13	Fan Metal (R)	ANG2489
	14	Screw	PPZ50P100FZK
	15	Screw	BMZ30P060FZK
	16	•••••	
	17	Niplocker	AEC1803
	18	Fan Label	AAX2785
	19	J115 3P Housing Wire	ADX2780
	20	Binder	AEC-093

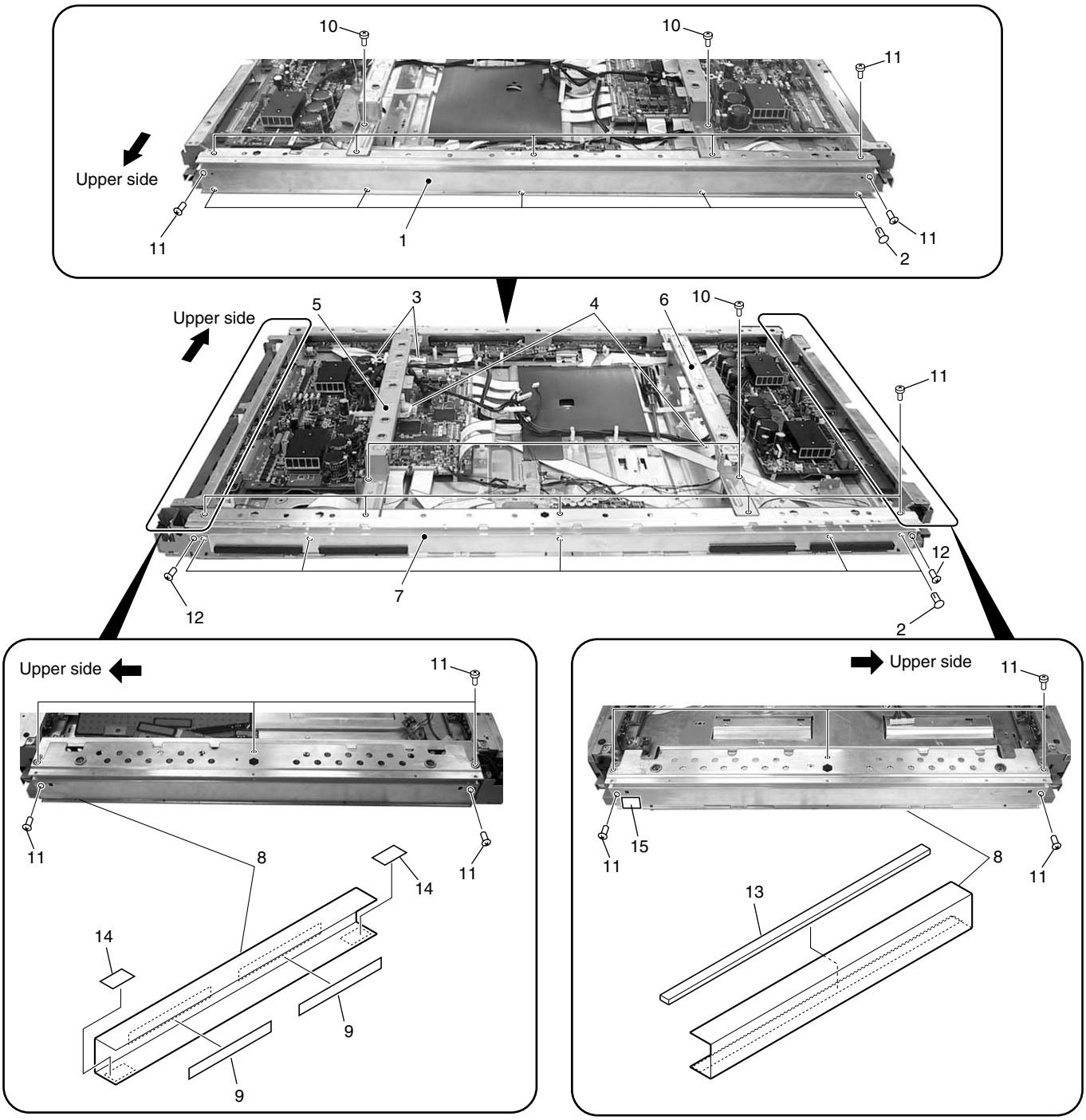
2.7 UNDER LAYER SECTION (6)



● UNDER LAYER SECTION (6) PARTS LIST

Mark	No.	Description	Part No.
NSP	1	ADR CONNECT A Assy	AWZ6678
NSP	2	ADR CONNECT B Assy	AWZ6679
NSP	3	ADR CONNECT C Assy	AWZ6680
NSP	4	ADR CONNECT D Assy	AWZ6681
NSP	5	ADR RESONANCE Assy	AWZ6682
NSP	6	BRIDGE A Assy	AWZ6674
NSP	7	BRIDGE B Assy	AWZ6675
NSP	8	BRIDGE C Assy	AWZ6676
NSP	9	BRIDGE D Assy	AWZ6677
	10	SUB ADDRESS A Assy	AWZ6692
	11	SUB ADDRESS B Assy	AWZ6693
NSP	12	SCAN (A) Assy	AWZ6666
NSP	13	SCAN (B) Assy	AWZ6667
	14	Y DRIVE Assy	AWZ6683
	15	DIGITAL VIDEO Assy	AWV1941
	16	THERMAL SENSOR Assy	AWZ6639
NSP	17	X CONNECTOR (A) Assy	AWZ6672
NSP	18	X CONNECTOR (B) Assy	AWZ6673
	19	X DRIVE Assy	AWV1930
	20	MX AUDIO Assy	AWZ6644
	21	J209 Flexible Flat Cable	ADD1206
	22	J210 Flexible Flat Cable	ADD1204
	23	J211 Flexible Flat Cable	ADD1199
	24	J212 Flexible Flat Cable	ADD1201
	25	J201 Flexible Flat Cable	ADD1183
	26	J202 Flexible Flat Cable	ADD1183
	27	Flat Clamp	AEC1879
	28	J203 Flexible Flat Cable	ADD1198
	29	J205 Flexible Flat Cable	ADD1202
	30	J206 Flexible Flat Cable	ADD1200
	31	J207 Flexible Flat Cable	ADD1208
	32	J208 Flexible Flat Cable	ADD1205
	33	Power Sheet (43)	AMR3284
	34	Rivet	BEC1066
	35	J110 3P Housing Wire	ADX2741
	36	J108 8P Housing Wire	ADX2740
	37	J102 Wire PE	ADX2738
	38	J103 13P Housing Wire	ADX2779
	39	J116 4P Housing Wire	ADX2783
	40	J118 Wire L	ADX2763
	41	J119 13P Housing Wire	ADX2768
	42	J109 Wire X	ADX2787
	43	Binder	AEC-093
	44	J204 Flexible Flat Cable	ADD1207
	45	J104 Wire W	ADX2786
	46	J117 4P Housing Wire	ADX2783

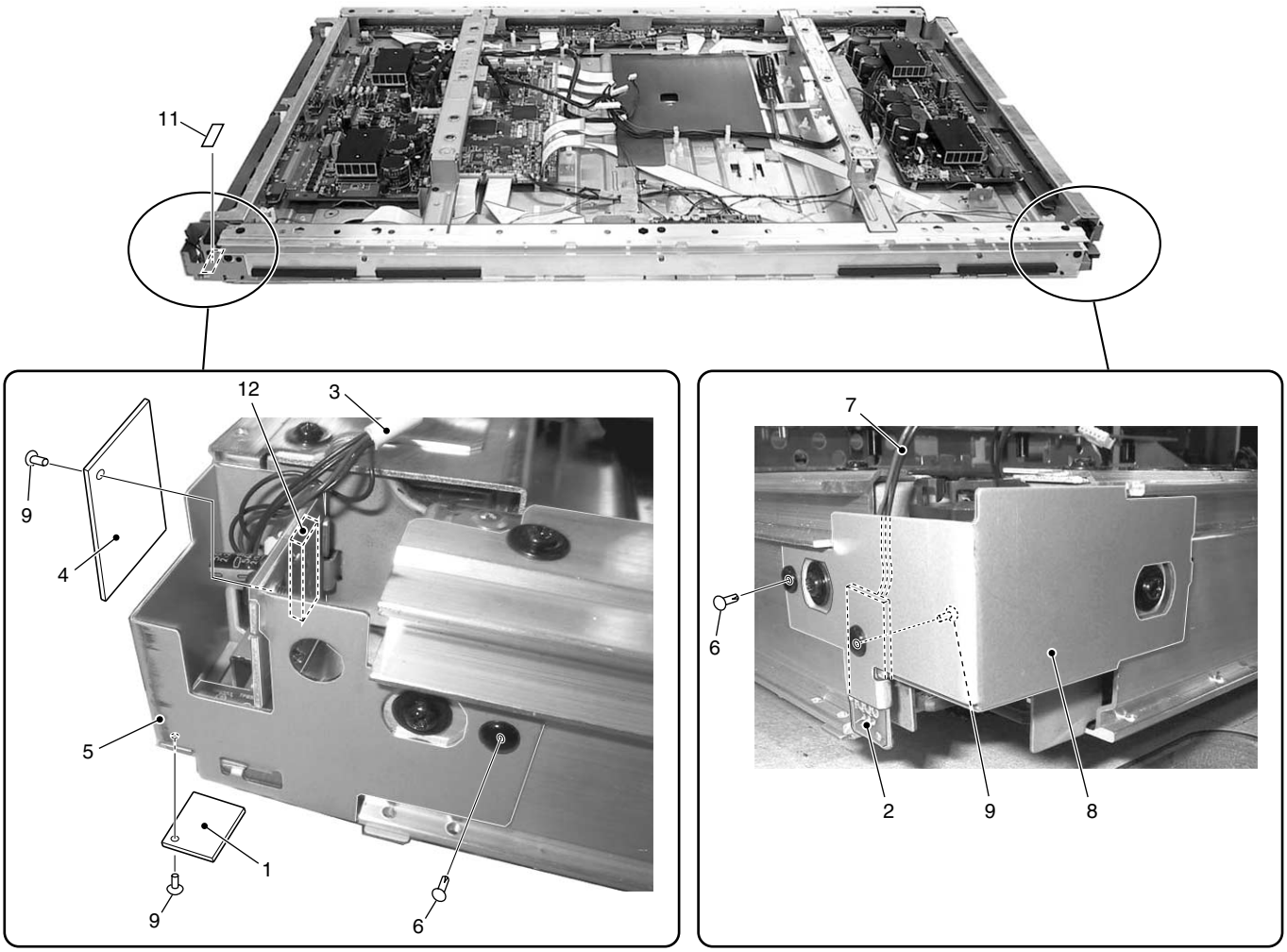
2.8 MIDDLE LAYER SECTION (1)



● MIDDLE LAYER SECTION (1) PARTS LIST

Mark	No.	Description	Part No.
NSP	1	Front Chassis HU (43)	ANA1670
NSP	2	Card Spacer	AEC1902
	3	Niplocker	AEC1803
	4	Card Corner Holder	BEC1144
NSP	5	Sub Frame L	ANG2517
NSP	6	Sub Frame R	ANG2518
NSP	7	Front Chassis HL (43CMX)	ANA1692
NSP	8	Front Chassis V (43)	ANA1672
	9	FPC Cushion (43)	AEB1371
	10	Screw	ABA1283
	11	Screw	ABA1294
	12	Screw	BMZ30P060FMC
	13	VR Cushion	AEB1374
	14	V Cushion	AED1205
	15	Gascket R	ANK1695

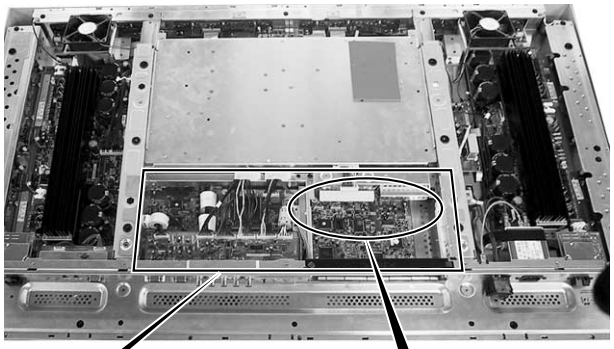
2.9 MIDDLE LAYER SECTION (2)

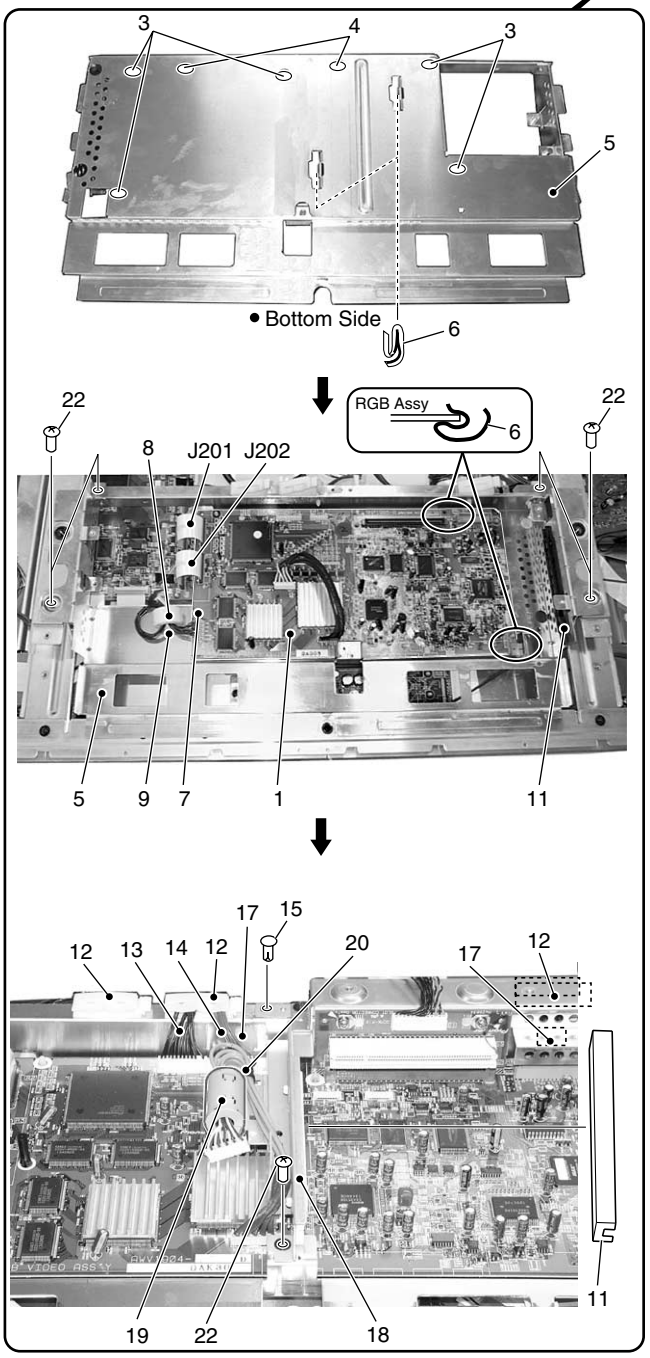


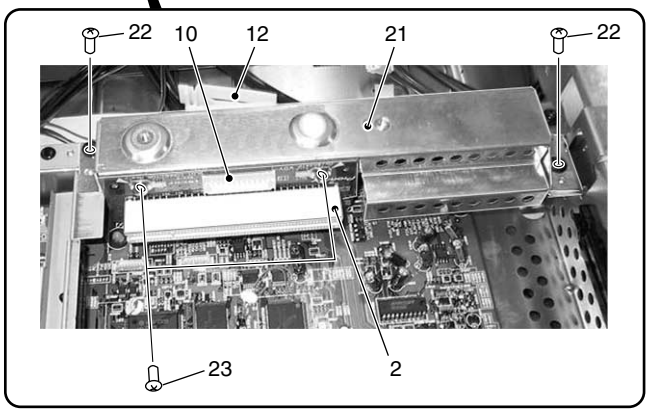
● MIDDLE LAYER SECTION (2) PARTS LIST

Mark	No.	Description	Part No.
	1	IR Assy	AWZ6643
	2	MX LED Assy	AWZ6642
	3	J113 Wire O	ADX2778
	4	KEY CONNECTOR Assy	AWZ6695
NSP	5	IR Holder	ANG2494
	6	Nyron Rivet	AEC1671
	7	J111 Wire Y	ADX2788
NSP	8	Switch Holder	ANG2493
	9	Screw	BMZ30P040FMC
	10	•••••	
	11	V Cushion	AED1205
	12	Gascket R	ANK1695

2.10 MIDDLE LAYER SECTION (3)



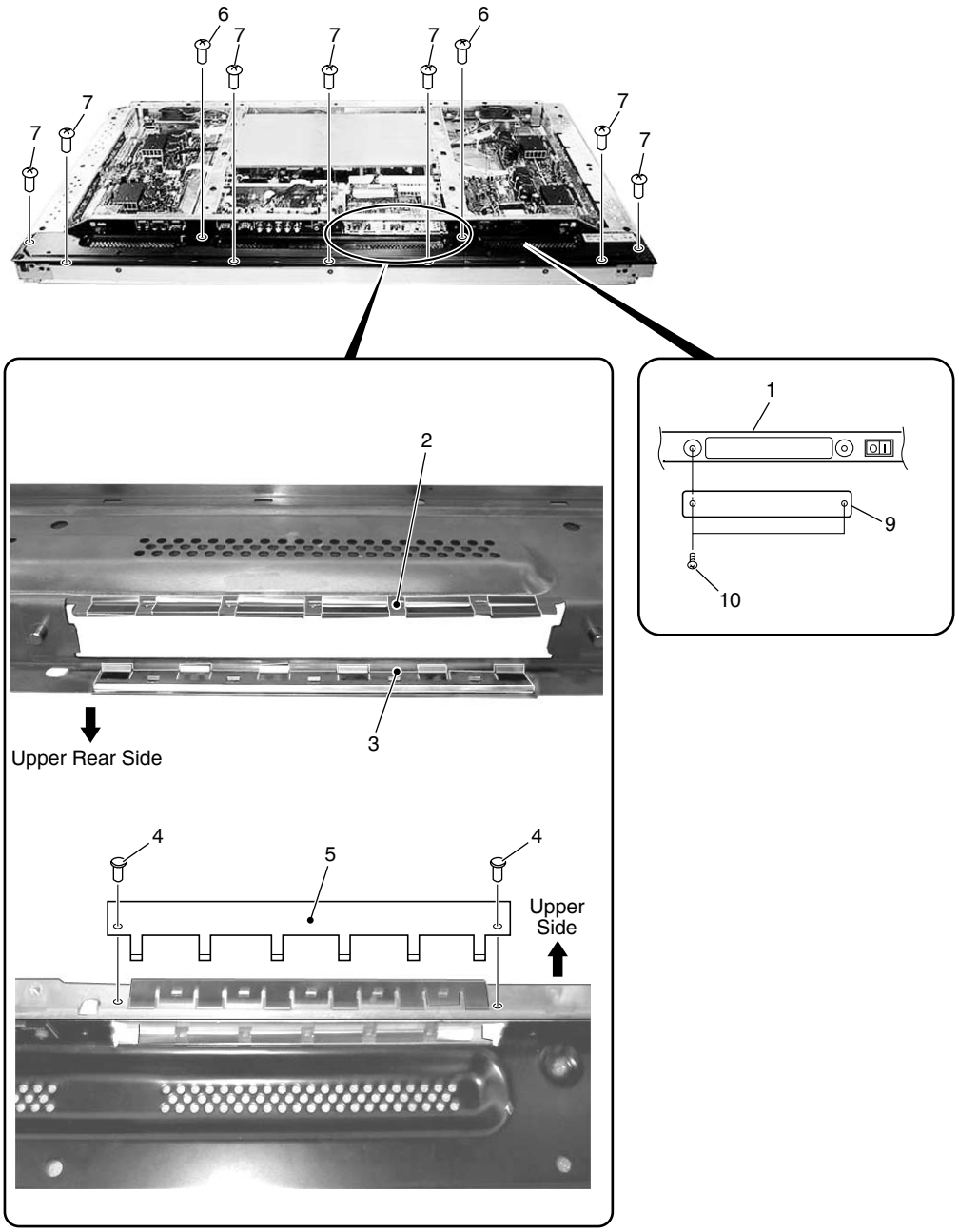




• MIDDLE LAYER SECTION (3) PARTS LIST

Mark	No.	Description	Part No.
	1	RGB Assy	AWZ6697
	2	SLOT CONNECTOR Assy	AWZ6634
	3	Spacer	AEC1065
	4	Card Spacer	AEC1882
NSP	5	RGB Base	ANA1662
	6	Ground Finger	ANG2468
	7	Card Spacer	AEC1899
	8	Ferrite Core (L3)	ATX1037
	9	Ferrite Core Holder	AEC1818
	10	J112 13P Housing Wire	ADX2784
	11	Guide Rail EX	AEC1900
	12	Clamp	AEC1884
	13	J107 12P Housing Wire	ADX2702
	14	J109 Wire X	ADX2787
	15	Nyron Rivet	AEC1671
	16	•••••	
	17	Wire Saddle	AEC1745
NSP	18	Video Stay	AND1171
	19	Ferrite Core (L2)	ATX1039
	20	Binder	AEC-093
NSP	21	PCB Stay	AND1170
	22	Screw	AMZ30P060FZK
	23	Screw	VBB30P100FNI

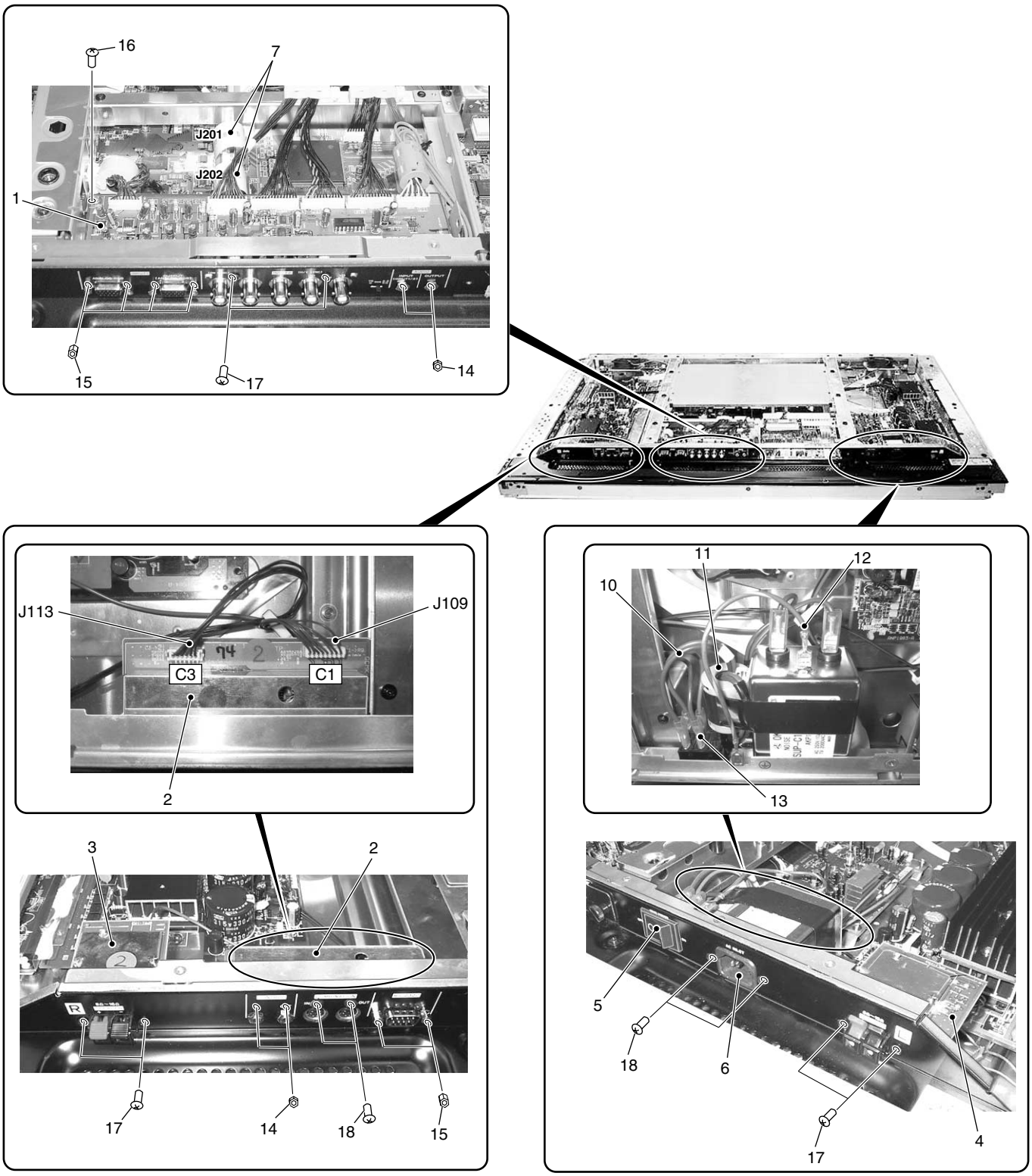
2.11 MIDDLE LAYER SECTION (4)



● MIDDLE LAYER SECTION (4) PARTS LIST

Mark	No.	Description	Part No.
	1	Terminal Panel CMX	ANG2486
	2	Slot Spring (Under)	ABK1028
	3	Slot Spring (Upper)	ABK1024
	4	Card Spacer	AEC1898
	5	Enclosure Sheet	AMR3281
	6	Screw	AMZ30P060FZK
	7	Screw	TBZ40P080FZK
	8	•••••	
	9	Expansion Slot Cover	ANG2463
	10	Screw	BMZ30P060FZK

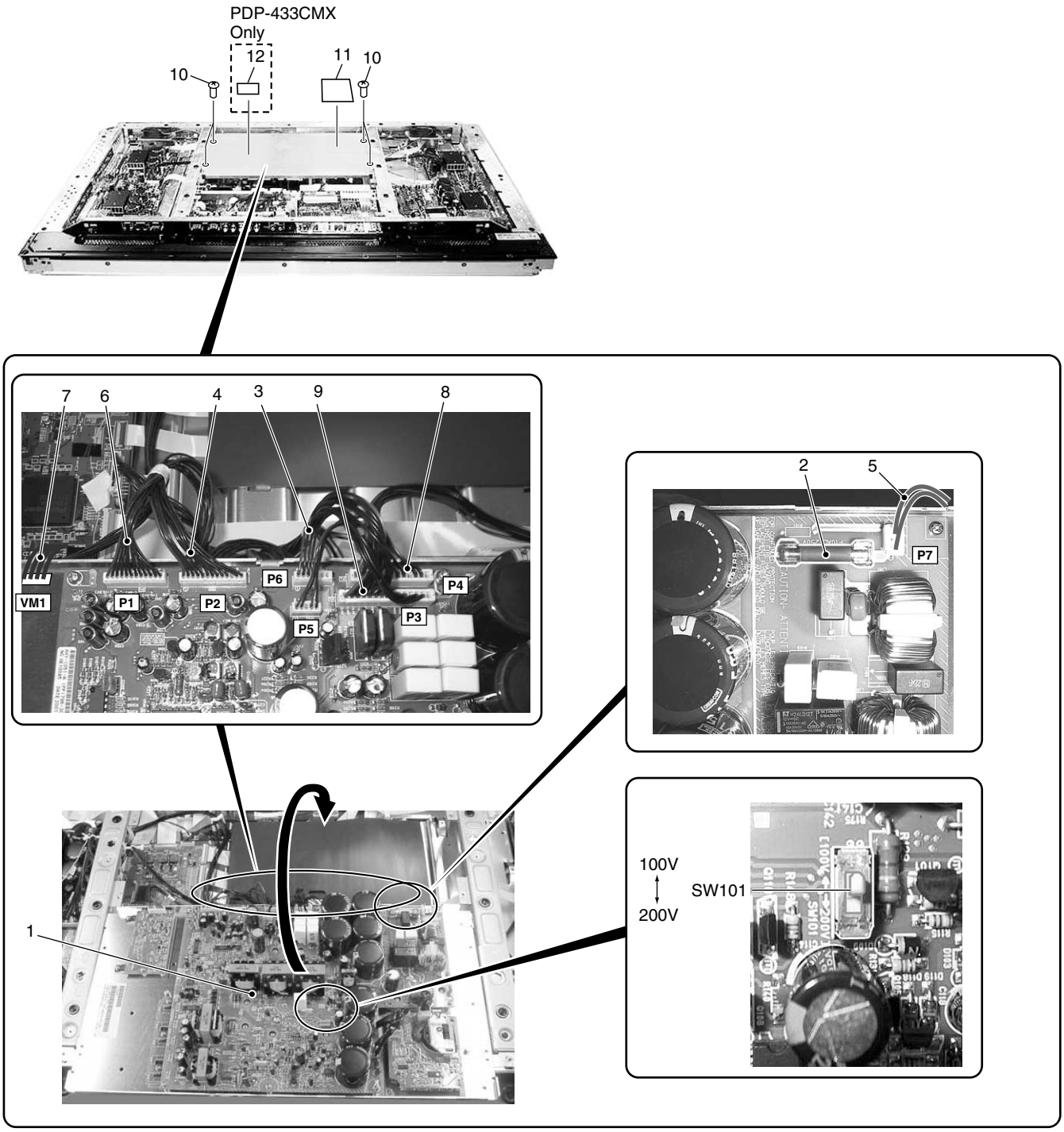
2.12 UPPER LAYER SECTION (1)



● UPPER LAYER SECTION (1) PARTS LIST

Mark	No.	Description	Part No.
	1	I/O Assy	AWZ6631
	2	CONTROL Assy	AWZ6633
	3	SP OUT R Assy	AWZ6636
	4	SP OUT L Assy	AWZ6635
⚠	5	Power Switch (S1)	BSM1006
⚠	6	AC Inlet with Filter (CN1)	AKP1223
	7	J201, J202 Flexible Cable	ADD1183
	8	•••••	
	9	•••••	
	10	J106 Wire C	ADX2693
	11	Ferrite Core (L1)	ATX1032
	12	J114 Earth Wire	ADX2709
	13	J105 Wire B	ADX2692
	14	Hexagonal Nut	ABN1035
	15	Hexagonal Head Screw	BBA1051
	16	Screw	PMB30P060FNI
	17	Screw	BPZ30P080FZK
	18	Screw	BMZ30P060FZK

2.13 UPPER LAYER SECTION (2)



(1) UPPER LAYER SECTION (2) PARTS LIST

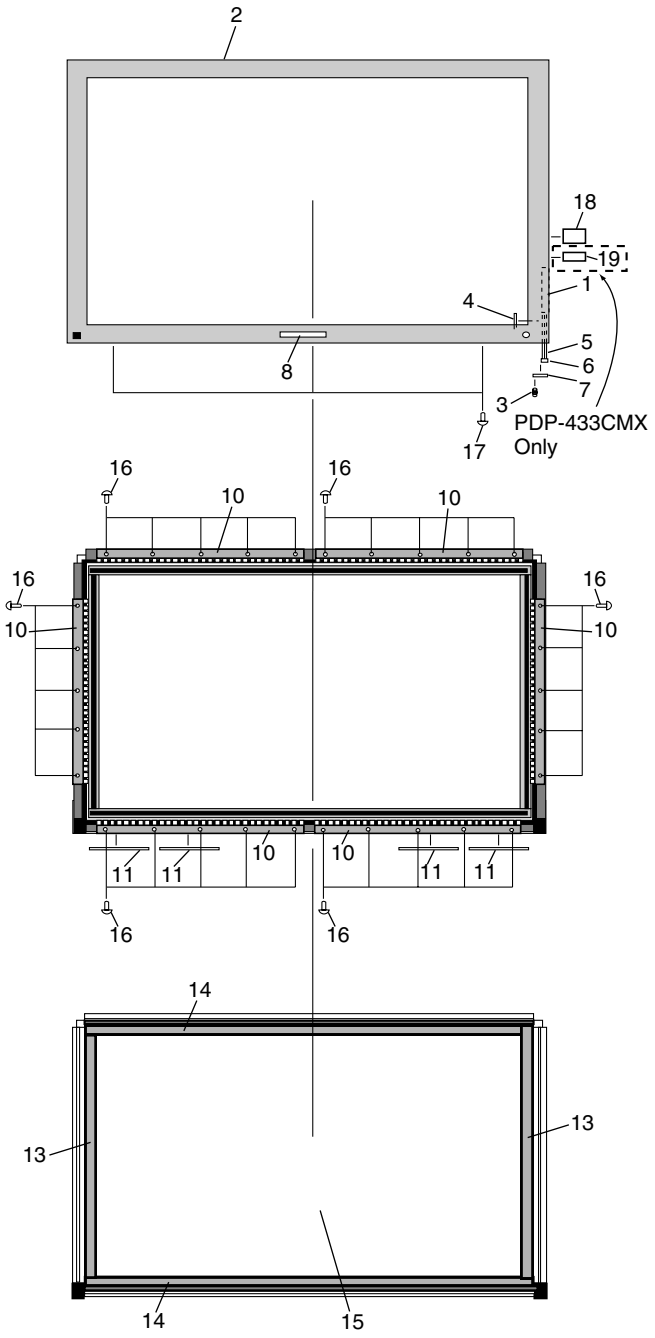
Mark	No.	Description	Part No.
⚠	1	SW Power Supply Module	AXY1056
⚠	2	FU1 Fuse (10A)	See Contrast table (2)
	3	J104 Wire W	ADX2786
	4	J119 13P Housing Wire	ADX2768
	5	J105 Wire B	ADX2692
	6	J101 12P Housing Wire	ADX2771
	7	J118 Wire L	ADX2763
	8	J103 13P Housing Wire	ADX2779
	9	J102 Wire PE	ADX2738
	10	Screw	AMZ30P060FZK
	11	Silicone Sheet P	AEH1035
	12	Solder Warning Label	See Contrast table (2)

(2) CONTRAST TABLE

PDP-433CMX/LUCB and PDP-433MXE/YVLDK are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			PDP-433CMX	PDP-433MXE	
			LUCB	YVLDK	
⚠	2	FU1 Fuse (10A/125V)	AEK1069	Not used	
⚠	2	FU1 Fuse (10A/400V)	Not used	AEK1071	
	12	Solder Warning Label	AAX2644	Not used	

2.14 FRONT CASE SECTION



(1) FRONT CASE SECTION PARTS LIST

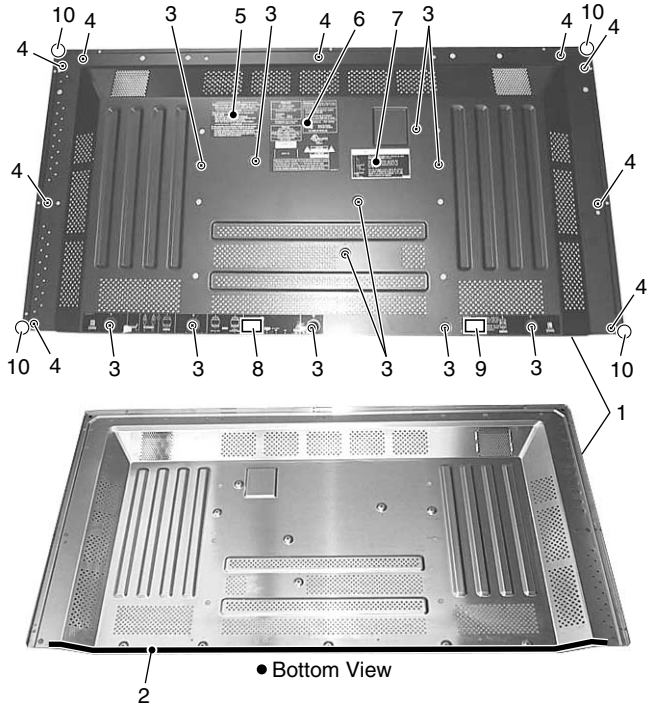
Mark	No.	Description	Part No.
	1	SIDE KEY Assy	AWZ6637
	2	Front Case Assy 43 (M)	AMB2712
	3	Rivet	AEC1877
	4	Flexible Seal	AEH1036
	5	J213 Flexible Cable	ADD1195
	6	Ferrite Core (L4)	ATX1043
	7	Lead Cover (MX)	AMB2703
	8	Pioneer Badge	AAM1091
	9	• • • • •	
NSP	10	Panel Holder (43)	ANG2487
	11	Spacer	AEC1896
	12	• • • • •	
	13	Panel Cushion V (43)	AED1201
	14	Panel Cushion H (43)	AED1200
	15	Protect Panel Assy (43)	AMR3303
	16	Screw	ABZ30P050FZK
	17	Screw	VMZ30P060FZK
	18	Energy Star Label	AAX2856
NSP	19	Display Label	See Contrast table (2)

(2) CONTRAST TABLE

PDP-433CMX/LUCB and PDP-433MXE/YVLDK are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			PDP-433CMX	PDP-433MXE	
			LUCB	YVLDK	
NSP	19	Display Label	AAX2836	Not used	

2.15 REAR SECTION



(1) REAR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Rear Case (M)	ANE1601
	2	Gascket A	ANK1694
	3	Screw	AMZ30P060FZK
	4	Screw	TBZ40P080FZK
	5	Cleaning Label	AAX2751
NSP	6	Name Label	See Contrast table (2)
	7	Bolt Caution Label	AAX2852
	8	Terminal Display Label R (43)	AAX2878
	9	Terminal Display Label L (43)	See Contrast table (2)
	10	Rear Corner Label	AAX2862

(2) CONTRAST TABLE

PDP-433CMX/LUCB and PDP-433MXE/YVLDK are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			PDP-433CMX	PDP-433MXE	
			LUCB	YVLDK	
NSP	6	Name Label (43 CMX)	AAL2385	Not used	
NSP	6	Name Label (43 MXE)	Not used	AAL2390	
	9	Terminal Display Label L (43)	AAX2876	Not used	
	9	Terminal Display Label L (43E)	Not used	AAX2877	

2.16 PDP SERVICE ASSY 433 (AWU1043)

PDP Service Assy 433 (AWU1043) consists of the following parts.

● PARTS LIST

Mark	No.	Description	Part No.
		Panel Chassis (43) Assy	AWU1038
NSP		Front Chassis V (43)	ANA1672
NSP		Front CHassis HU (43)	ANA1670
NSP		Front Chassis HL	ANA1692
NSP		Sub Frame L (43)	ANG2517
NSP		Sub Frame R (43)	ANG2518
		Scan IC Spring (43L)	ABK1029
		Scan IC Spring (43R)	ABK1030
NSP		Metal Fitting	ANG2464
		FPC Cushion (43)	AEB1371
NSP		PCB Spacer	AEC1121
		Locking Card Spacer	AEC1736
		Circuit Board Spacer	AEC1872
		Circuit Board Spacer	AEC1873
		Spacer	AEC1896
NSP		Card Spacer	AEC1902
		Wire Saddle	AEC1904
		Panel Cushion H (43)	AED1200
		Panel Cushion V (43)	AED1201
		V Cushion	AED1205
		Insullation Sheet	AMR3263
		Scan Sheet (43)	AMR3287
		Card Corner Holder	BEC1144
		Screw	ABA1283
		Screw	ABA1294
		Screw	ABZ30P060FMC
		Screw	BMZ30P060FMC
		Screw	PMB30P060FNI
		Screw	VBB30P100FNI
		Bolt	ABA1259
		Corner Pad	AHA2293
		Upper Carton	AHD3139
		Under Carton	AHD3140
		Packing Sheet	AHG1291
		Washer	WB80FZB
		VR Cushion	AEB1374
		Niplocker	AEC1803
		Static Plate	AHK1013
		Plate	AHK1014
		Screw	BYC40P220FMC
		Washer	WC60FZK

2.17 PANEL CHASSIS (43) ASSY (AWU1038)

Panel Chassis (43) Assy (AWU1038) consists of the following parts.

● PARTS LIST

Mark	No.	Description	Part No.	
NSP		SCAN FUKUGO ASSY	AWV1927	*
NSP		ADDRESS FUKUGO ASSY	AWV1928	*
NSP		Address Module (IC1 - IC32)	AXF1113	
NSP		FPC (J1,J2)	ADY1079	
NSP		FPC (J3,J4)	ADY1080	
NSP		Chassis Assy (43)	ANA1693	
NSP		├─Chassis (43)	ANA1668	
NSP		├─Base Chassis (43)	ANA1669	
NSP		├─Scan Heatsink (43)	ANH1601	
NSP		├─Corner Angle A	ANG2457	
NSP		├─Corner Angle B	ANG2458	
NSP		├─Tube Cover	AMR3262	
		├─Silicone Sheet 43	AEH1043	
		├─Adhesive Tape 43	AEH1044	
		├─Adhesive Tape B 43	AEH1054	
		├─Panel Silicone Sheet	AEH1055	
		└─Silicone Sheet B 43	AEH1056	
		Pin Grommet	AEC1015	
		Card Spacer	AEC1889	
		Scan Silicone Sheet (43)	AEH1047	
NSP		Plasma Panel Assy (43)	AAV1239	
		Screw	VBB30P100FNI	

● LIST OF ASSY

Mark	No.	Description	Part No.
NSP		SCAN FUKUGO ASSY	AWV1927
NSP		├─ SCAN (A) ASSY	AWZ6666
NSP		├─ SCAN (B) ASSY	AWZ6667
NSP		├─ X CONNECTOR (A) ASSY	AWZ6672
NSP		├─ X CONNECTOR (B) ASSY	AWZ6673
NSP		├─ BRIDGE A ASSY	AWZ6674
NSP		├─ BRIDGE B ASSY	AWZ6675
NSP		├─ BRIDGE C ASSY	AWZ6676
NSP		└─ BRIDGE D ASSY	AWZ6677
		ADDRESS FUKUGO ASSY	AWV1928
NSP		├─ ADR CONNECT A ASSY	AWZ6678
NSP		├─ ADR CONNECT B ASSY	AWZ6679
NSP		├─ ADR CONNECT C ASSY	AWZ6680
NSP		├─ ADR CONNECT D ASSY	AWZ6681
		└─ ADR RESONANCE ASSY	AWZ6682

■ Caution in Replacement of Chassis Block

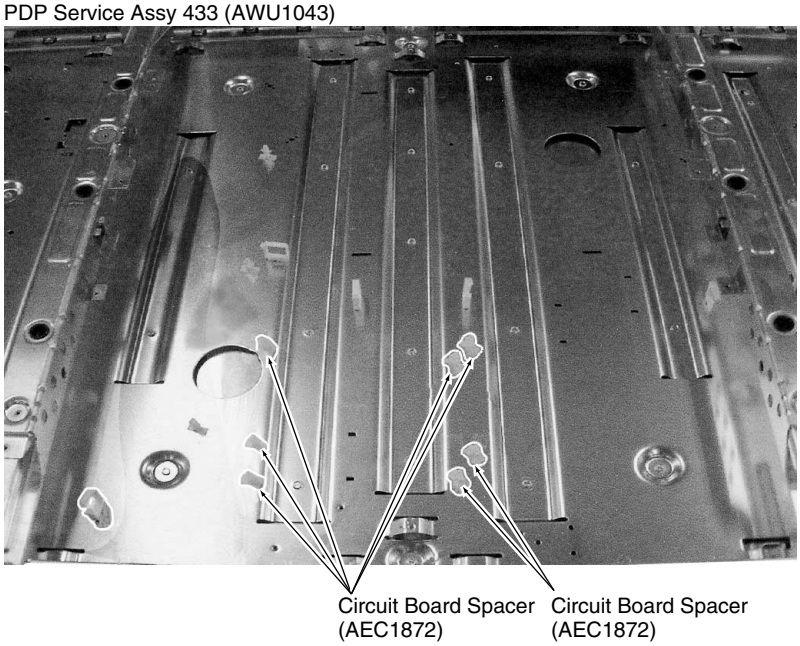
Please order the PDP Service Assy 433 (AWU1043) when replacing the Chassis block.
PDP Service Assy 433 is all common use parts of for business, public use and module.
Supply it by the state that installed Circuit Board Spacer (AEC1872) and Wire Saddle (AEC1904) as follows.
Therefore need to remove it in accordance with model.

Confirm character carved a seal near the parts, and remove it.

P : Public exclusive use
W : Module exclusive use
PW : Common use of public use and module

∗ In case of this unit, the parts that "W" is marked removes.

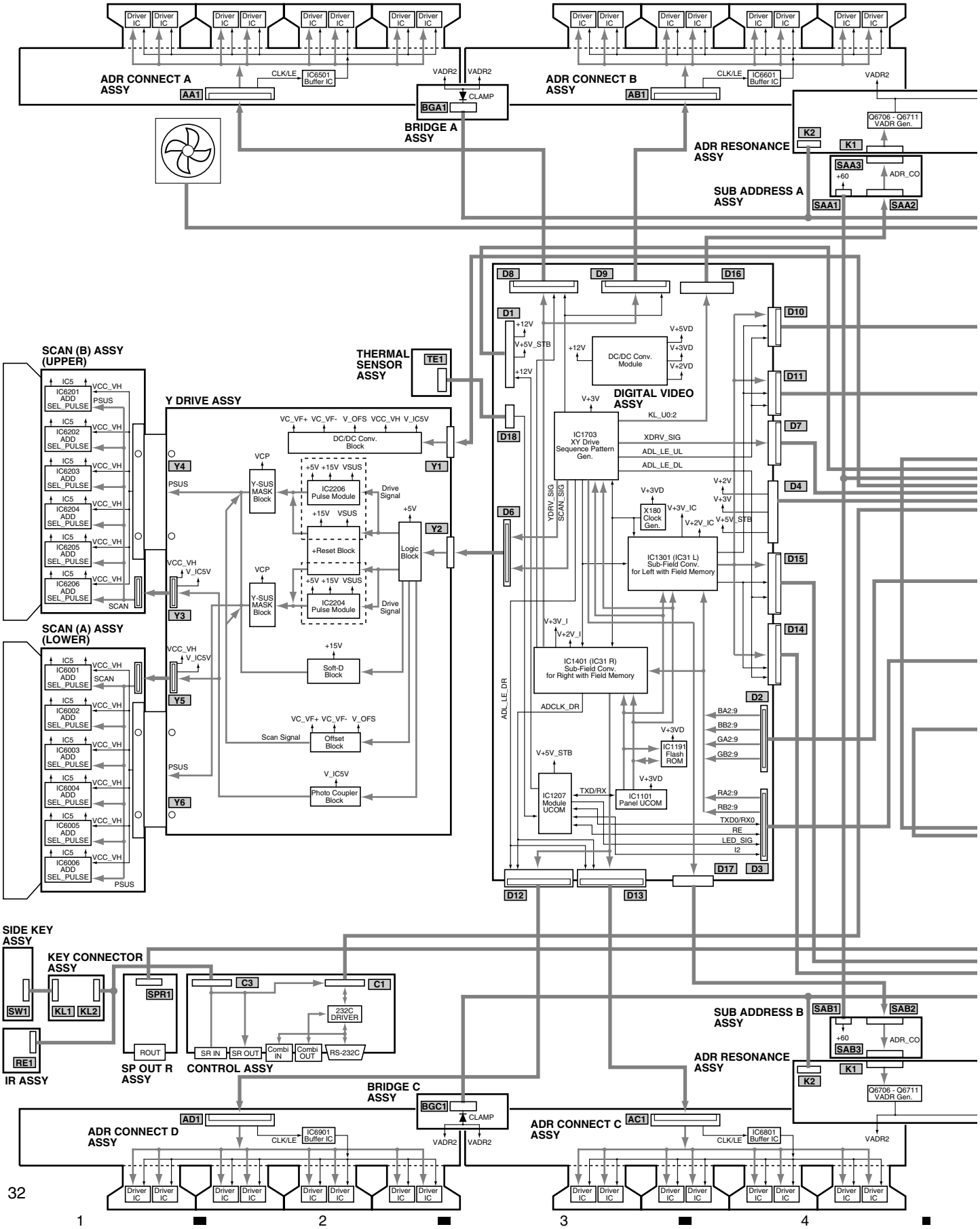
PDP Service Assy 433 (AWU1043)



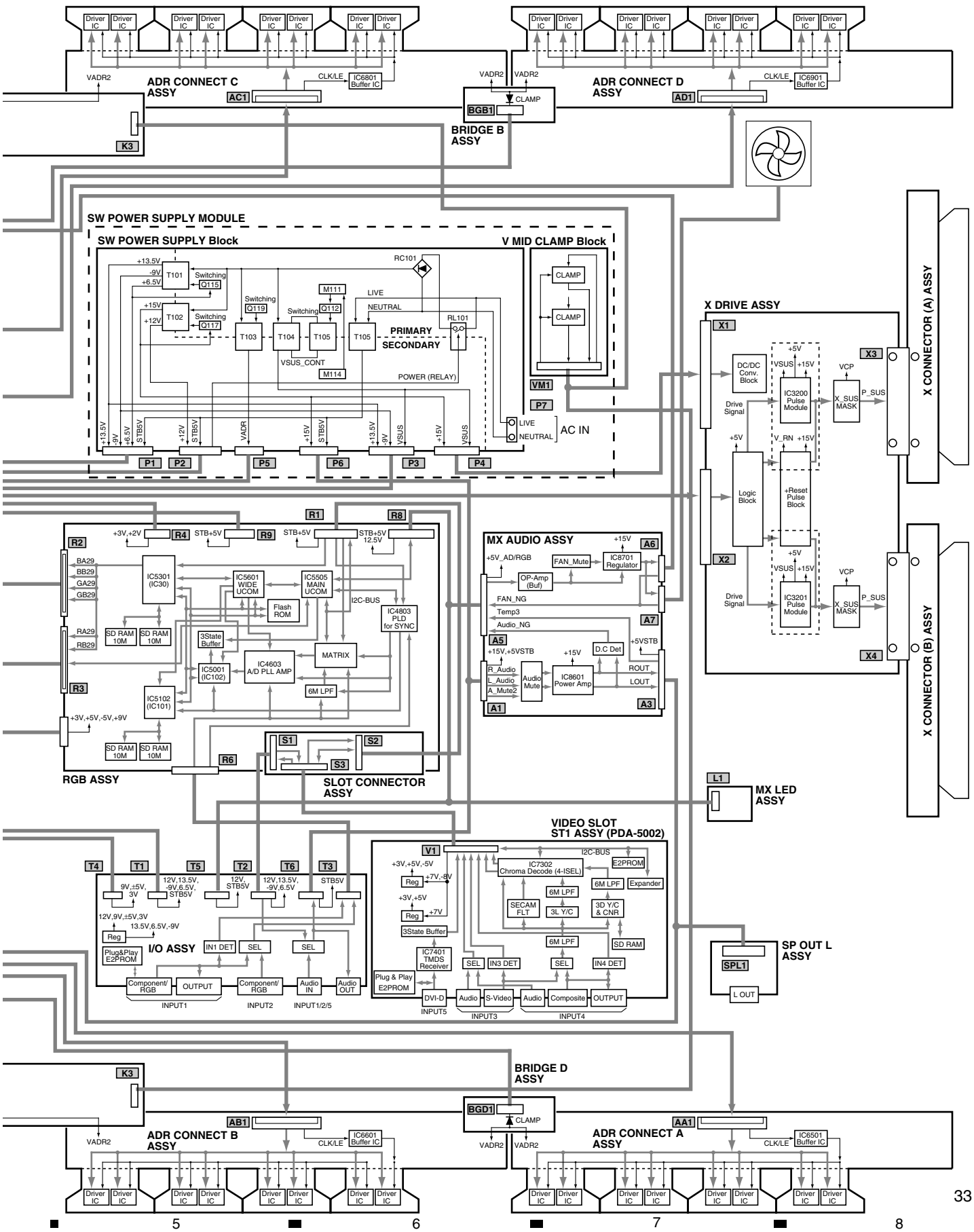
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

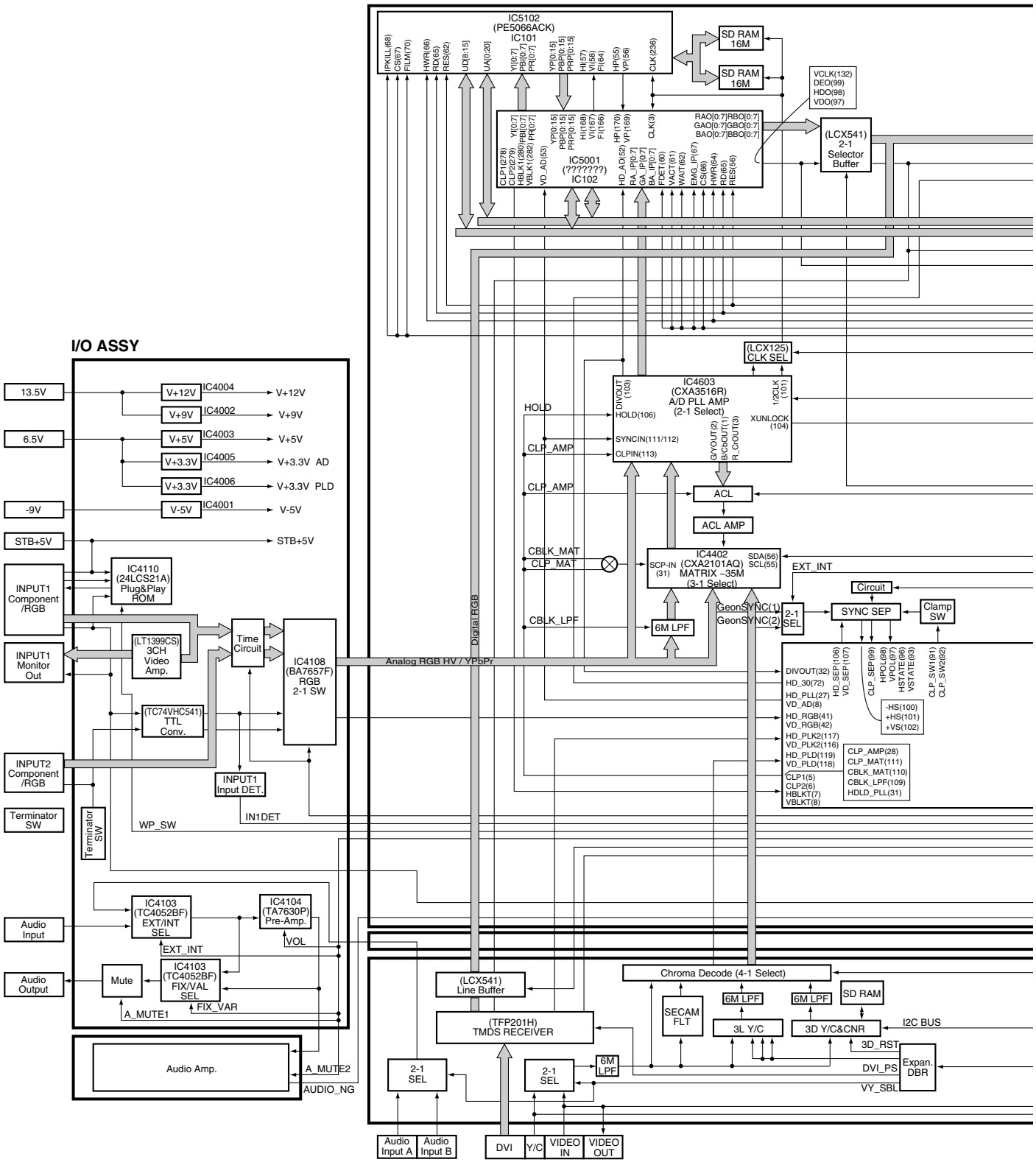
3.1.1 OVERALL BLOCK DIAGRAM

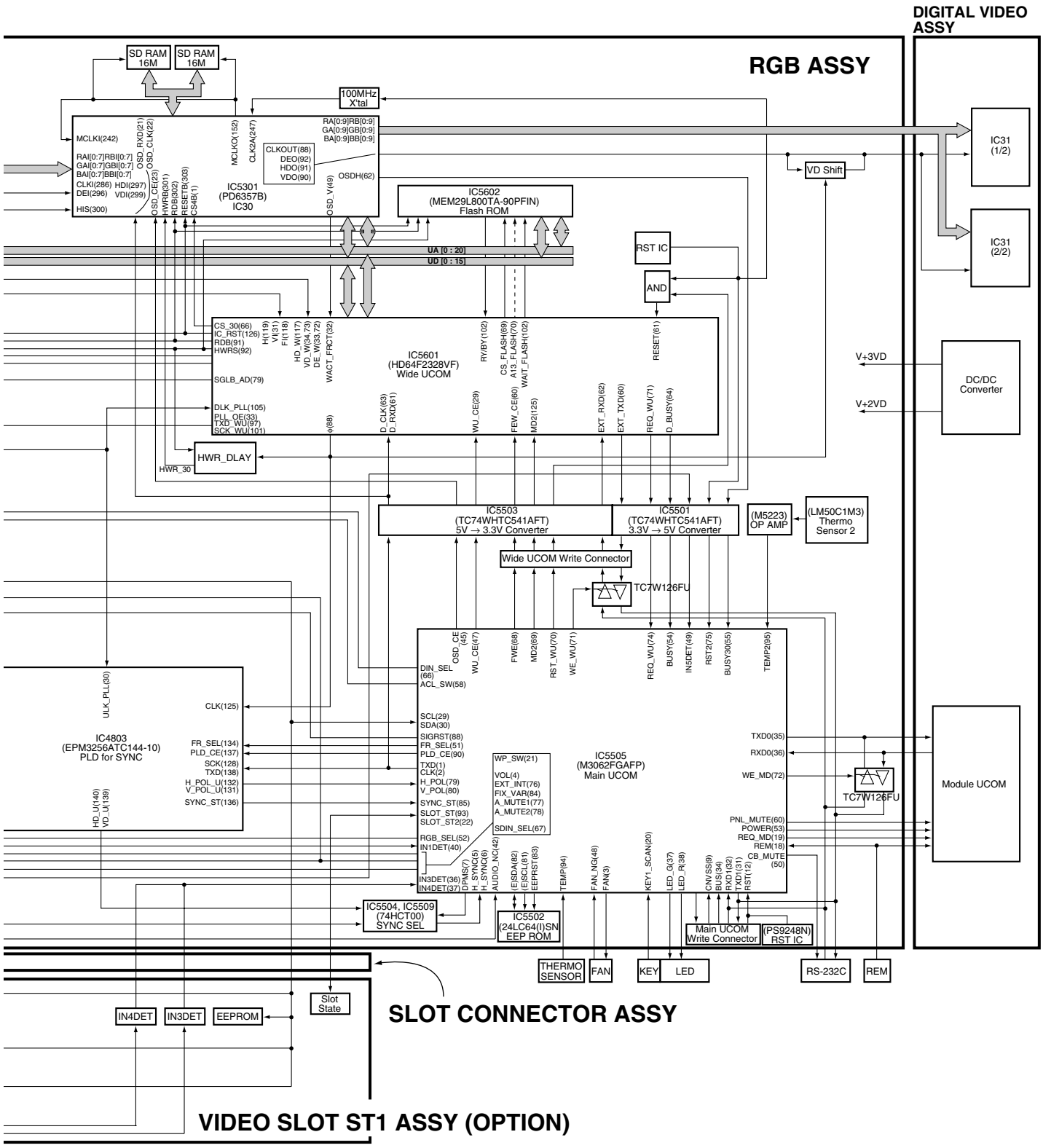


Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".

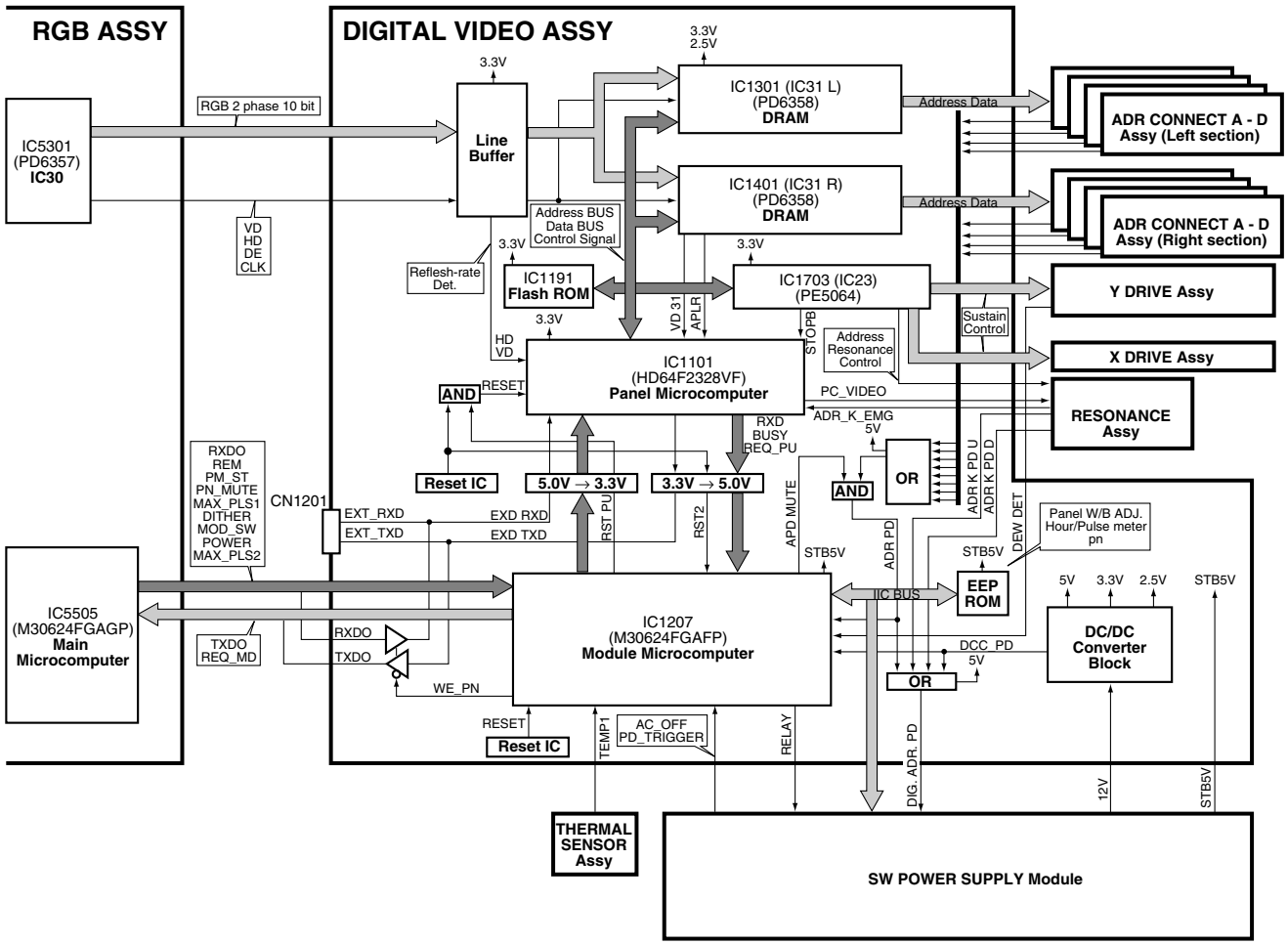


3.1.2 RGB ASSY

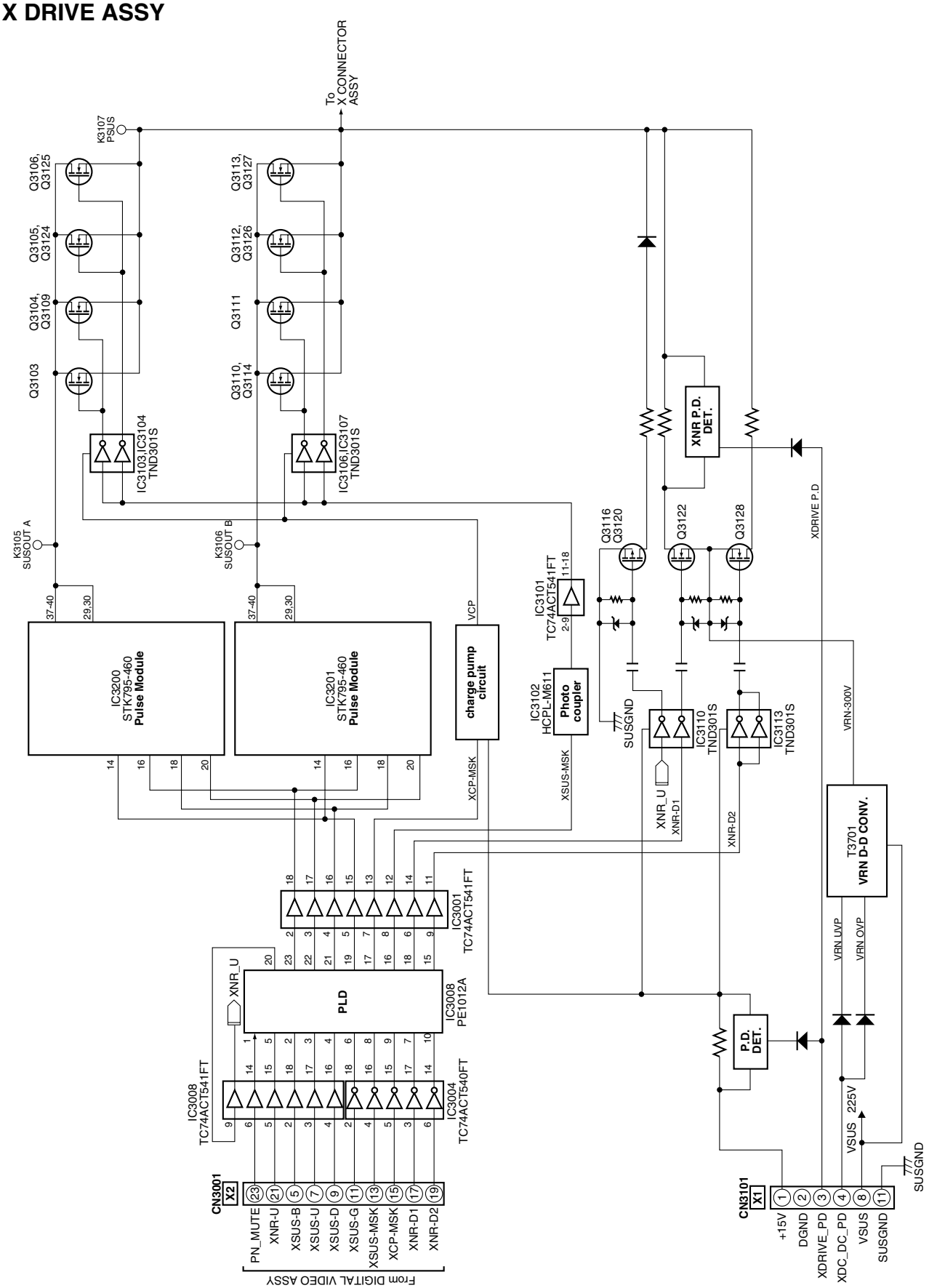

I/O ASSY
IC5102
(PE5066ACK)
IC101
SD RAM 16M
SD RAM 16M
VCLK(132)
DEO(99)
HDO(98)
VDO(97)
IC5001
(???????)
IC102
(LCX541)
2-1
Selector
Buffer
(LCX125)
CLK SEL
IC4603
(CXA3516R)
A/D PLL AMP
(2-1 Select)
HOLD
CLP_AMP
CLP_AMP
ACL
ACL AMP
CBLK_MAT
CLP_MAT
IC4402
(CXA2101AQ)
MATRIX -35M
(3-1 Select)
EXT_INT
CBLK_LPF
6M LPF
GeonSYNC(1)
GeonSYNC(2)
2-1
SEL
Circuit
SYNC SEP
Clamp
SW
13.5V
6.5V
-9V
STB+5V
V+12V
V+9V
V+5V
V+3.3V
V+3.3V
V-5V
IC4004
IC4002
IC4003
IC4005
IC4006
IC4001
V+12V
V+9V
V+5V
V+3.3V AD
V+3.3V PLD
V-5V
STB+5V
INPUT1
Component
/RGB
IC4110
(24LCS21A)
Plug&Play
ROM
INPUT1
Monitor
Out
(LT1399CS)
3CH
Video
Amp.
Time
Circuit
IC4108
(BA7657F)
RGB
2-1 SW
Analog RGB HV / YPbPr
Digital RGB
(TC74VHC541)
TTL
Conv.
INPUT2
Component
/RGB
INPUT1
Input DET.
Terminator
SW
Terminator
SW
WP_SW
IN1DET
IC4103
(TC4052BF)
EXT/INT
SEL
IC4104
(TA7630P)
Pre-Amp.
Audio
Input
EXT_INT
VOL
Audio
Output
Mute
IC4103
(TC4052BF)
FIX/VAL
SEL
A_MUTE1
FIX_VAR
Audio Amp.
A_MUTE2
AUDIO_NG
(LCX541)
Line Buffer
(TFP201H)
TMDS RECEIVER
2-1
SEL
2-1
SEL
6M
LPF
Chroma Decode (4-1 Select)
SECAM
FLT
6M LPF
6M LPF
SD RAM
3L Y/C
3D Y/C&CNR
I2C BUS
3D_RST
DVI_PS
VY_SBL
Expan.
DBR
Audio
Input A
Audio
Input B
DVI
Y/C
VIDEO
IN
VIDEO
OUT
DIVOUT(32)
HD_30(72)
HD_PLL(27)
VD_AD(8)
HD_RGB(41)
VD_RGB(42)
HD_PLK2(117)
VD_PLK2(116)
HD_PLD(119)
VD_PLD(118)
CLP1(5)
CLP2(6)
HBLKT(7)
VBLKT(8)
HD_SEP(106)
VD_SEP(107)
CLP_SEP(99)
HPOL(98)
VPOL(97)
HSTATE(96)
VSTATE(95)
CLP_SW1(91)
CLP_SW2(92)
-HS(100)
+HS(101)
+VS(102)
CLP_AMP(28)
CLP_MAT(111)
CBLK_MAT(110)
CBLK_LPF(109)
HDLD_PLL(31)


DIGITAL VIDEO ASSY
RGB ASSY
SD RAM 16M
SD RAM 16M
100MHz X'tal
IC5301 (PD6357B) IC30
IC5602 (MEM29L800TA-90PFIN) Flash ROM
UA [0 : 20]
UD [0 : 15]
RST IC
AND
VD Shift
IC31 (1/2)
IC31 (2/2)
IC5601 (HD64F2328VF) Wide UCOM
V+3VD
V+2VD
DC/DC Converter
HWR_DLAY
IC5503 (TC74WHTC541AFT) 5V → 3.3V Converter
IC5501 (TC74WHTC541AFT) 3.3V → 5V Converter
(M5223) OP AMP
(LM50C1M3) Thermo Sensor 2
Wide UCOM Write Connector
TC7W126FU
IC4803 (EPM3256ATC144-10) PLD for SYNC
IC5505 (M3062FGAFP) Main UCOM
Module UCOM
TC7W126FU
IC5504, IC5509 (74HCT00) SYNC SEL
IC5502 (24LC64(I)SN EEP ROM
Main UCOM Write Connector
(PS9248N) RST IC
THERMO SENSOR
FAN
KEY
LED
RS-232C
REM
Slot State
IN4DET
IN3DET
EEPROM
SLOT CONNECTOR ASSY
VIDEO SLOT ST1 ASSY (OPTION)

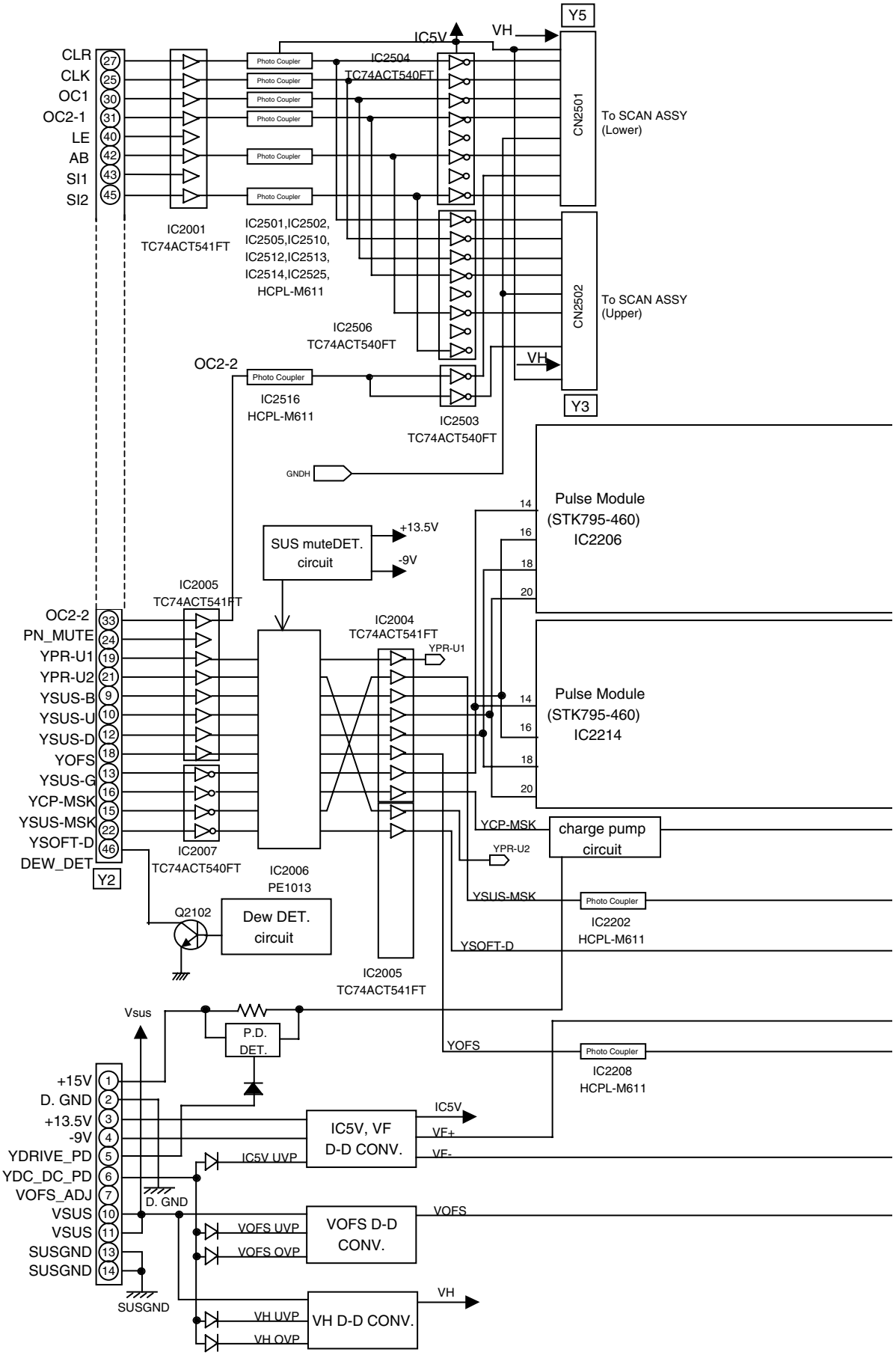
3.1.3 DIGITAL VIDEO ASSY

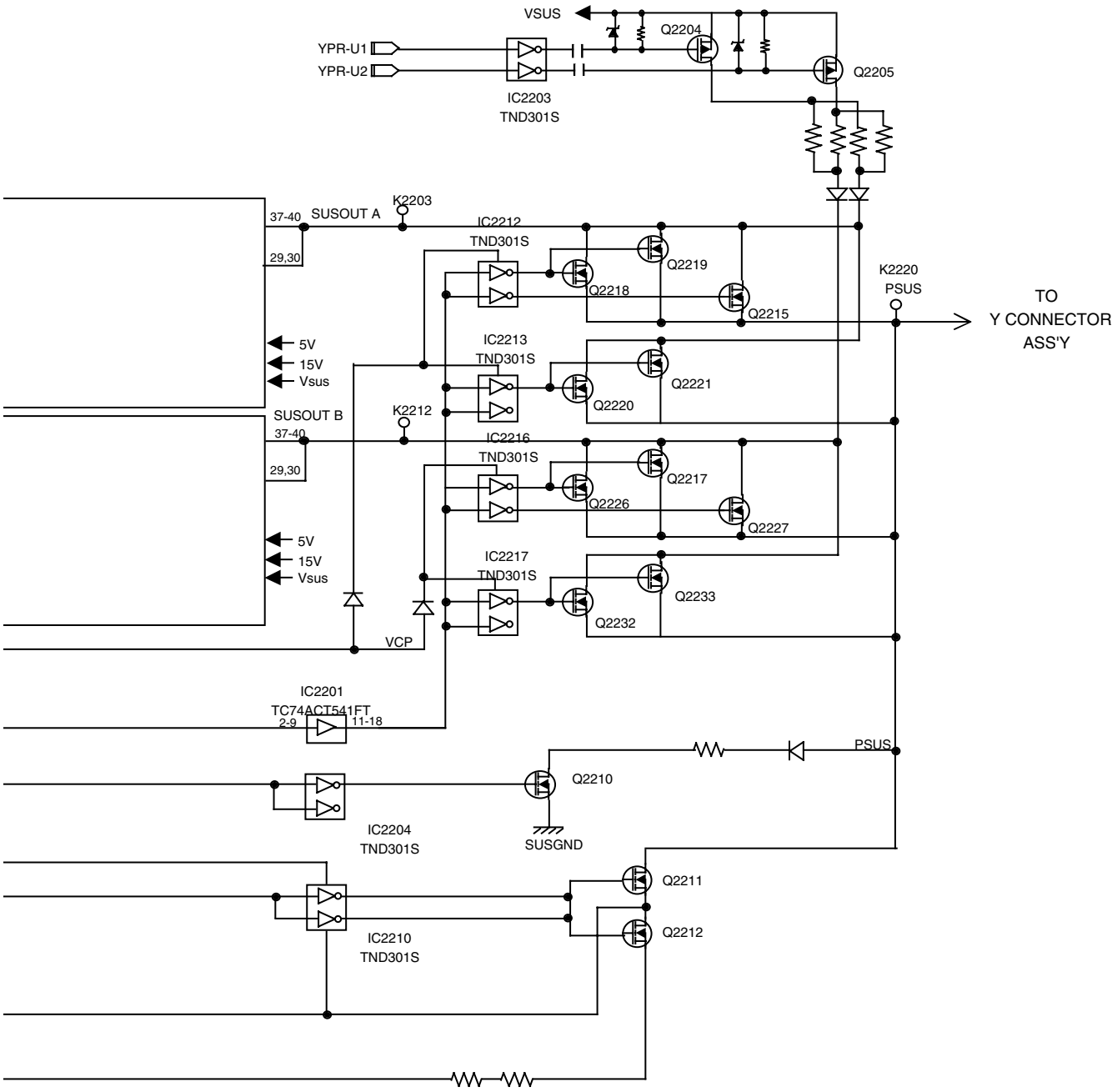


3.1.4 X DRIVE ASSY

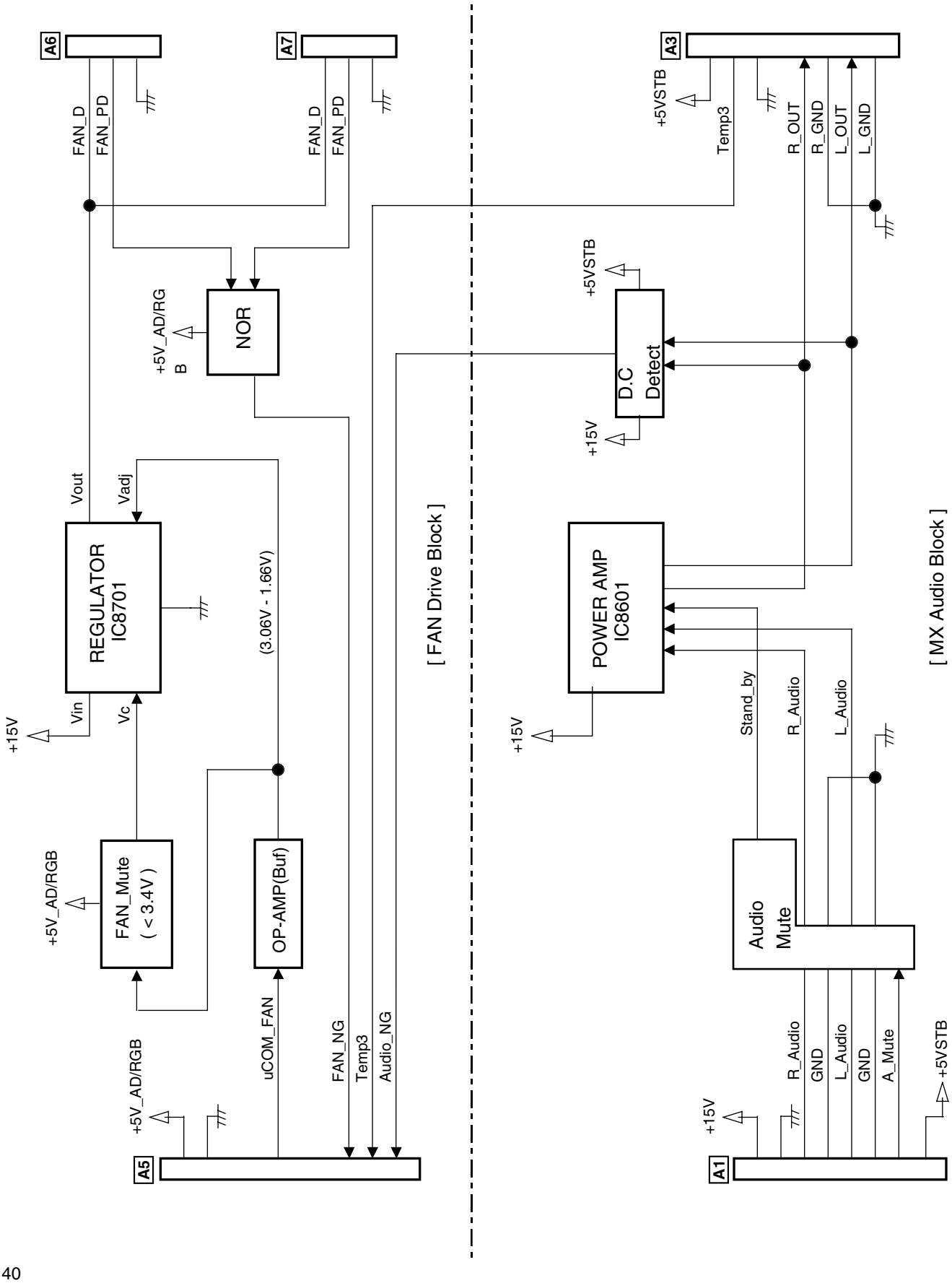


3.1.5 Y DRIVE ASSY

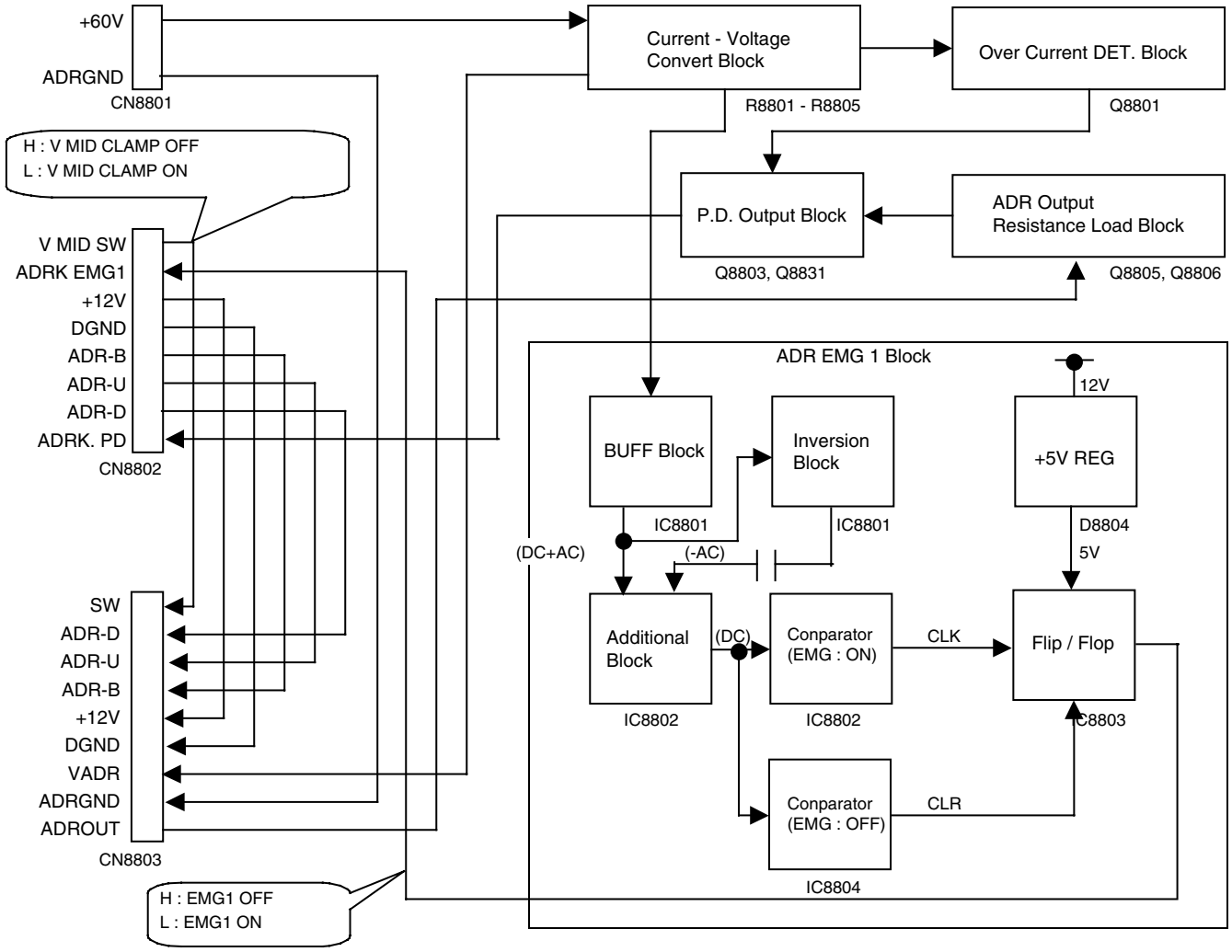



VSUS
Q2204
YPR-U1
YPR-U2
Q2205
IC2203
TND301S
K2203
37-40
SUSOUT A
IC2212
TND301S
29,30
Q2219
Q2218
Q2215
K2220
PSUS
TO
Y CONNECTOR
ASS'Y
5V
15V
Vsus
IC2213
TND301S
Q2221
Q2220
SUSOUT B
K2212
37-40
IC2216
TND301S
29,30
Q2217
Q2226
Q2227
5V
15V
Vsus
IC2217
TND301S
Q2233
Q2232
VCP
IC2201
TC74ACT541FT
2-9
11-18
PSUS
Q2210
IC2204
TND301S
SUSGND
Q2211
Q2212
IC2210
TND301S

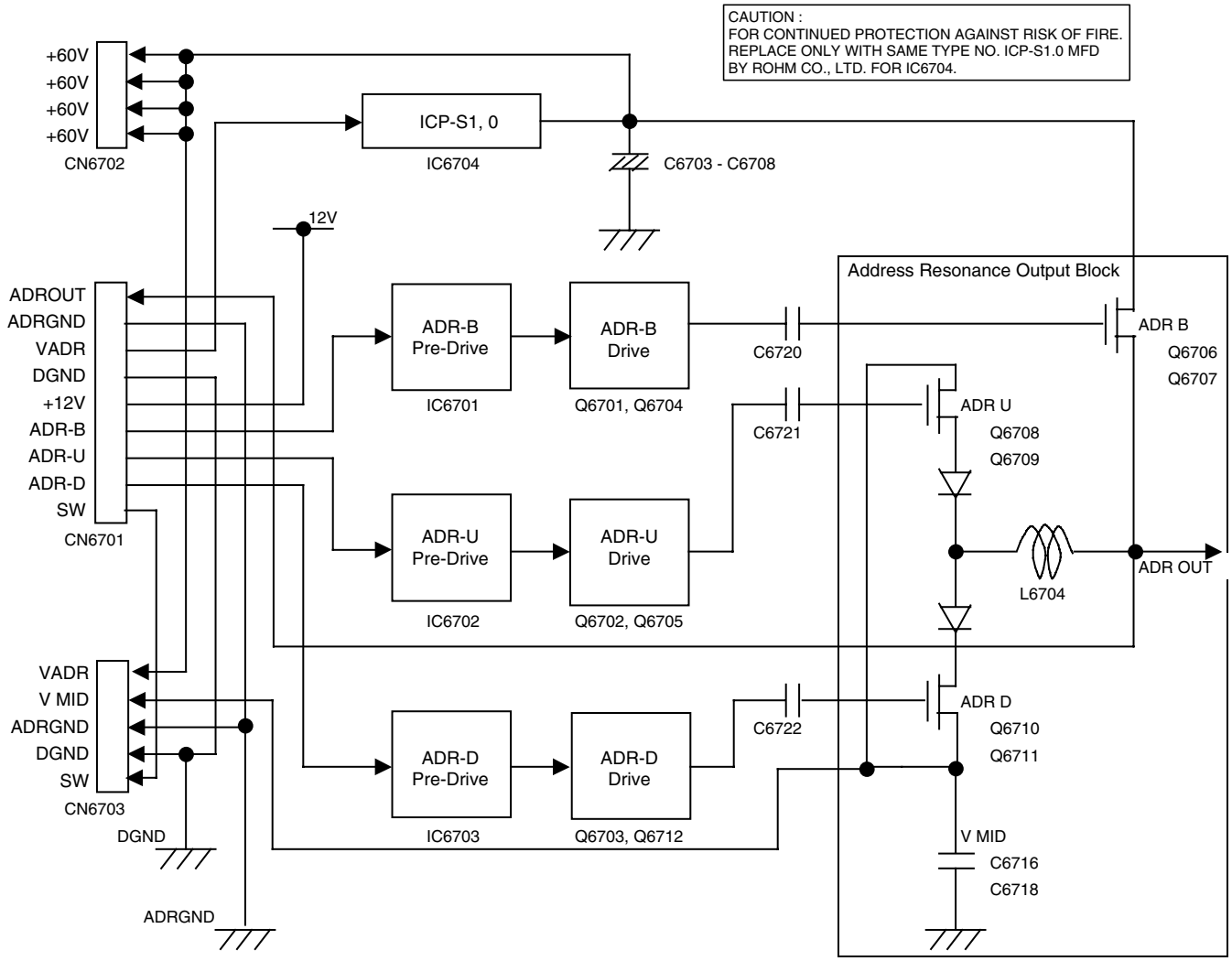
3.1.6 MX AUDIO ASSY



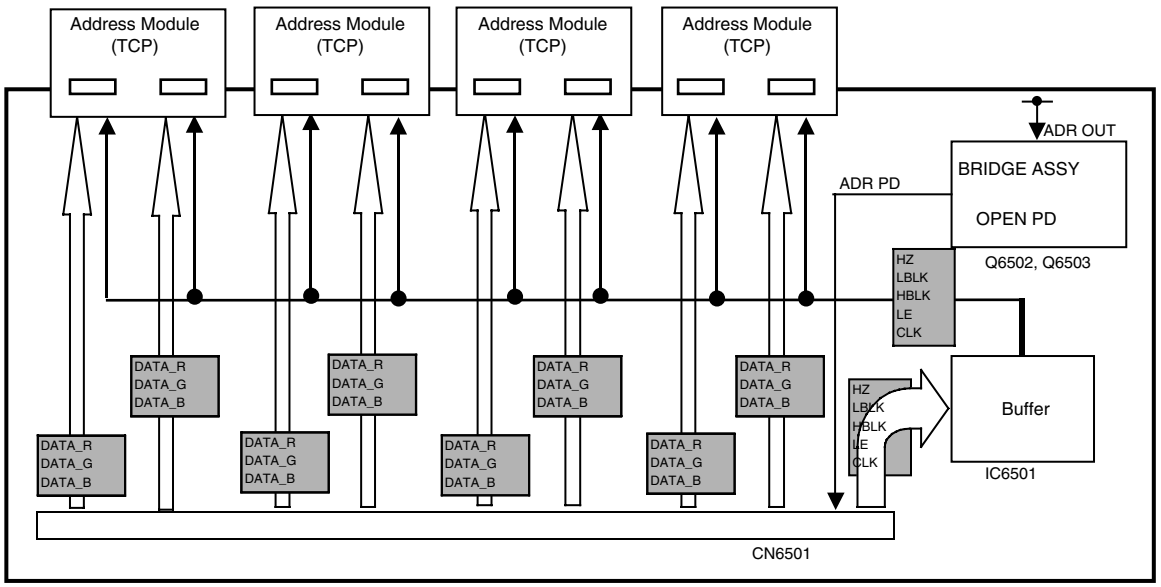
3.1.7 SUB ADDRESS A and B ASSYS



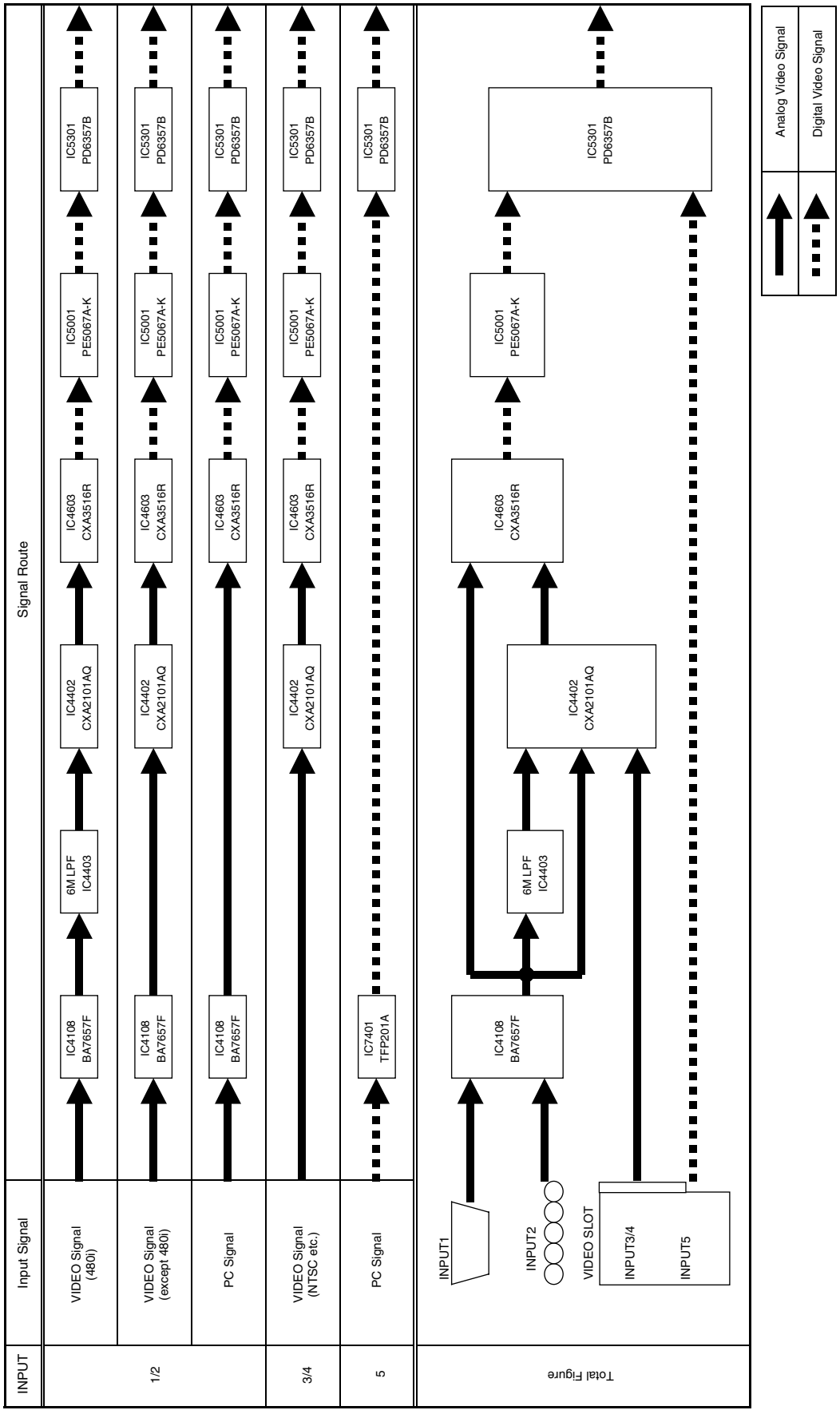
3.1.8 ADR RESONANCE ASSY



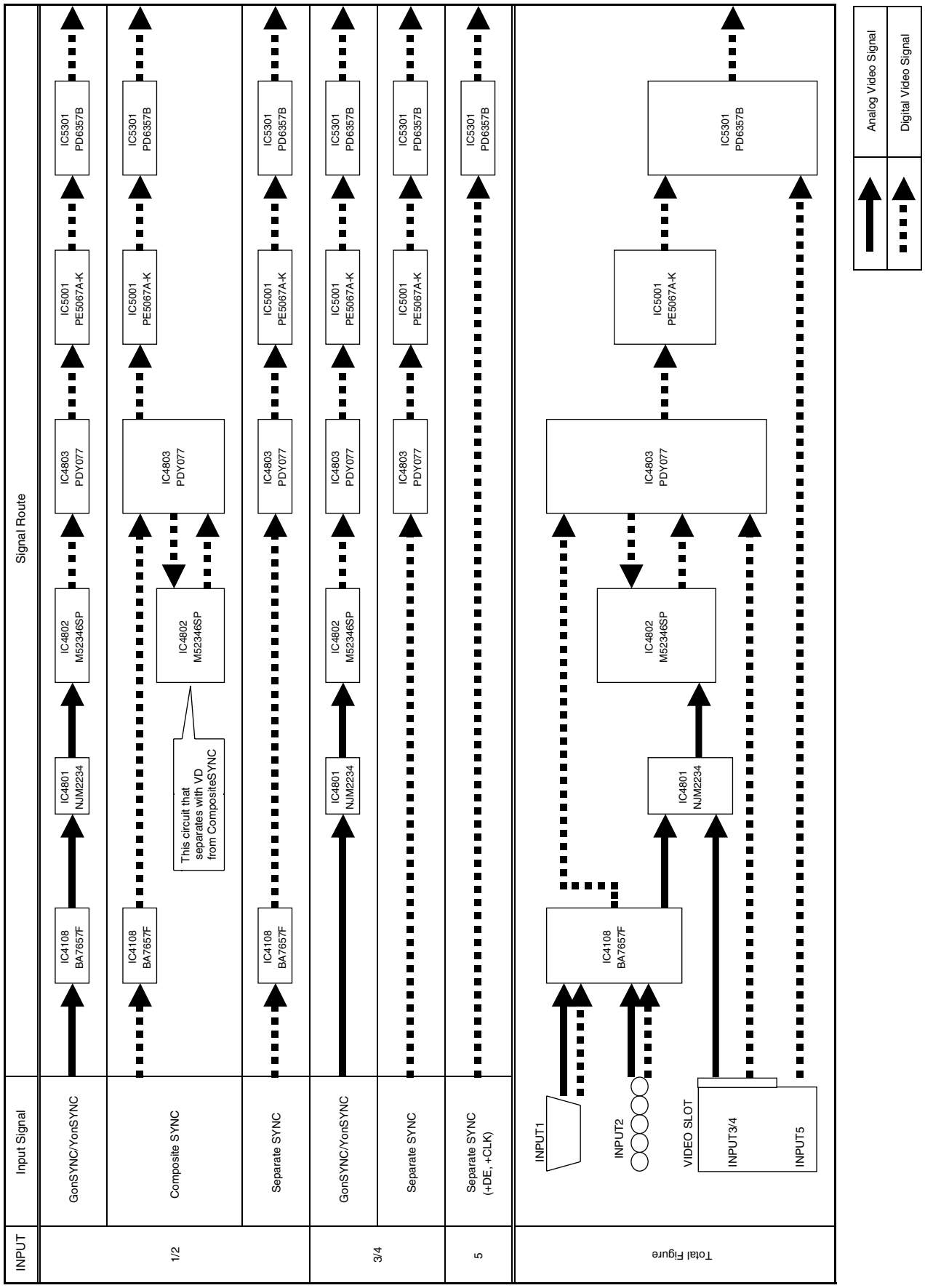
3.1.9 ADR CONNECT A, B, C and D ASSYS



3.1.10 VIDEO SIGNAL ROUTE



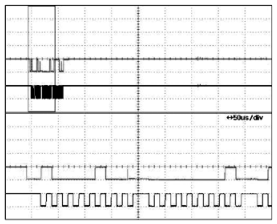
3.1.11 SYNC SIGNAL ROUTE



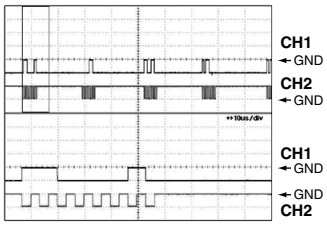
3.2 WAVEFORMS

RGB ASSY

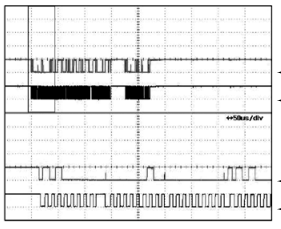
1 **CH1 : IC5505 - pin 29 (SCL)**
CH2 : IC5505 - pin 30 (SDA)
V: 5V/div. H: 500µsec/div.



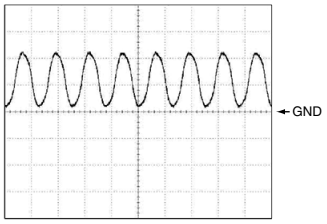
6 **CH1 : IC5505 - pin 1 (TXD)**
CH2 : IC5505 - pin 2 (CLK)
V: 5V/div. H: 100µsec/div.



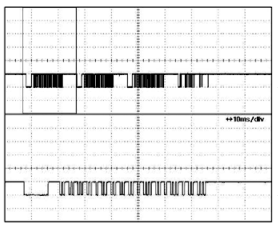
2 **CH1 : IC5505 - pin 81 ((E) SCL)**
CH2 : IC5505 - pin 82 ((E) SDA)
V: 5V/div. H: 500µsec/div.



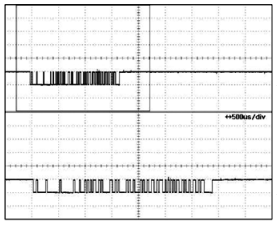
7 **IC5505 - pin 15 (XIN)**
V: 2V/div. H: 50nsec/div.



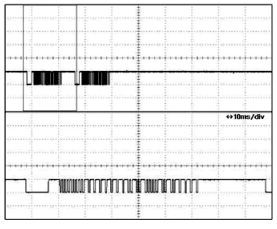
3 **IC5505 - pin 20 (KEYSCAN)**
V: 5V/div. H: 50msec/div.



4 **IC5505 - pin 35 (TXDO)**
V: 5V/div. H: 1msec/div.

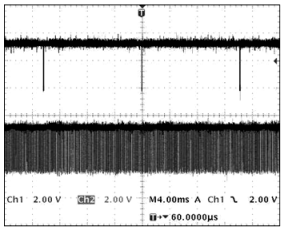


5 **IC5505 - pin 18 (REM)**
V: 5V/div. H: 50msec/div.

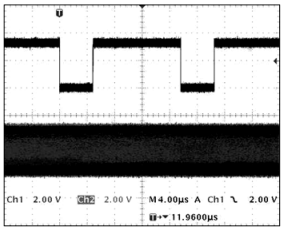


DIGITAL VIDEO ASSY

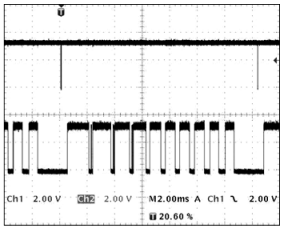
1 **K1327 (VDI)**
K1328 (HDI)
V: 2V/div. H: 4msec/div.



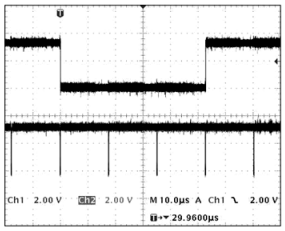
4 **K1326 (DEI)**
K1333 (VCLKL)
V: 2V/div. H: 4µsec/div.



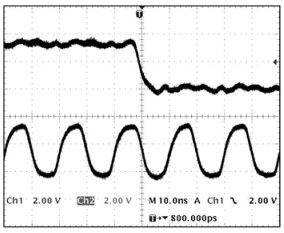
8 **K1308 (VDRB)**
IC1501 - pin 15 (LBLK)
V: 2V/div. H: 2msec/div.



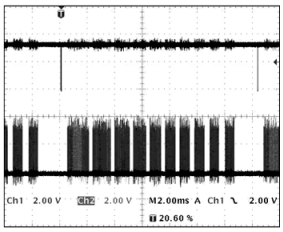
1 **K1327 (VDI)**
K1328 (HDI)
V: 2V/div. H: 10µsec/div.



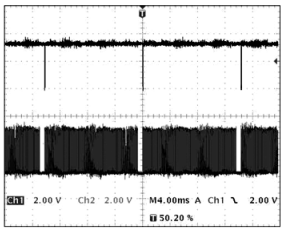
4 **K1326 (DEI)**
K1333 (VCLKL)
V: 2V/div. H: 10nsec/div.



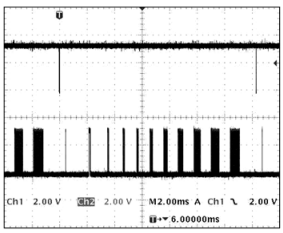
9 **K1308 (VDRB)**
IC1501 - pin 13 (LE)
V: 2V/div. H: 2msec/div.



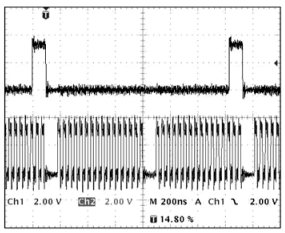
2 **K1327 (VDI)**
CN1004 pin 49 (R DIGITAL VIDEO)
V: 2V/div. H: 4msec/div.



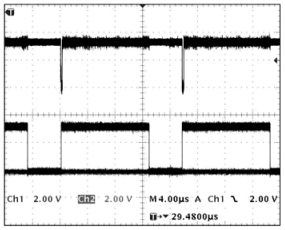
5 **K1308 (VDRB)**
R1713 - pin 7 (XSUS_B)
V: 2V/div. H: 2msec/div.



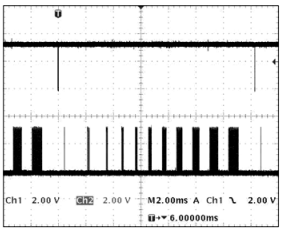
10 **IC1501 - pin 13 (LE)**
IC1501 - pin 11 (ADRCLK)
V: 2V/div. H: 200nsec/div.



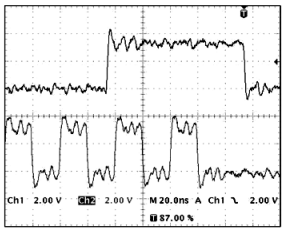
3 **K1328 (HDI)**
K1326 (DEI)
V: 2V/div. H: 4µsec/div.



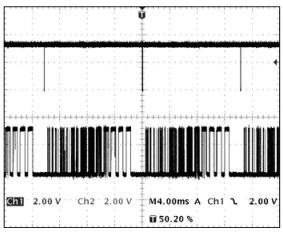
6 **K1308 (VDRB)**
R1703 - pin 8 (YSUS_B)
V: 2V/div. H: 2msec/div.



10 **IC1501 - pin 13 (LE)**
IC1501 - pin 11 (ADRCLK)
V: 2V/div. H: 20nsec/div.

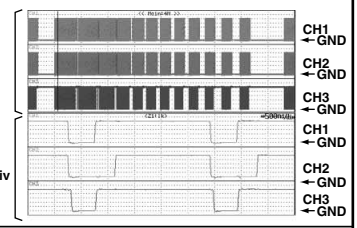


7 **K1308 (VDRB)**
R1343 - pin 8 (RDAT_DL0)
V: 2V/div. H: 4msec/div.

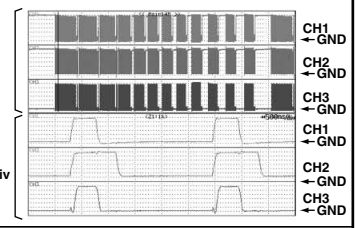


RESONANCE ASSY

① **CH1 : IC6702 - pin 2**
CH2 : IC6701 - pin 2
CH3 : IC6703 - pin 2
V: 1V/div.
(Input : VIDEO, Signal : Color bar)



② **CH1 : D6706 Cathode**
CH2 : D6703 Cathode
CH3 : D6708 Cathode
V: 2V/div.
(Input : VIDEO, Signal : Color bar)



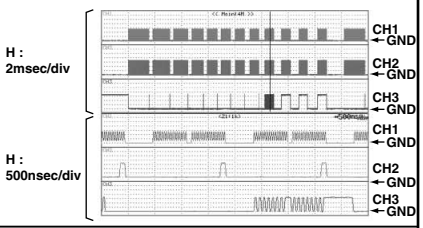
③ **CH1 : Q6706 Drain**
CH2 : Q6710 Soruse
V: 10V/div.
(Input : VIDEO, Signal : Color bar)

④ **CH1 : Q6706 Drain**
CH2 : Q6710 Soruse
V: 10V/div.
(Input : PC, Signal : Color bar)

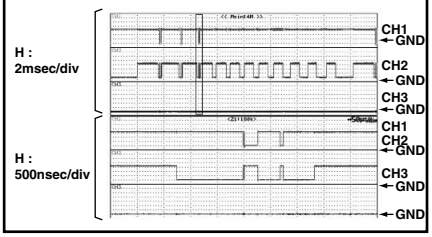
⑤ **CH1 : Q6708 Drain**
CH2 : Q6710 Drain
V: 10V/div.
(Input : VIDEO, Signal : Color bar)

ADR CONNECT A - D ASSY

① **CH1 : IC6501 - pin 8 (CLK)**
CH2 : IC6501 - pin 6 (LE)
CH3 : IC6501 - (DATA)
V: 1V/div.
(Input : VIDEO, Signal : Color bar)

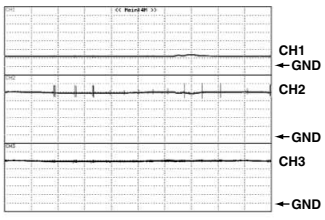


② **CH1 : IC6501 - pin 5 (HBLK)**
CH2 : IC6501 - pin 3 (LBLK)
CH3 : IC6501 - pin 2 (HZ)
V: 1V/div.
(Input : VIDEO, Signal : Color bar)

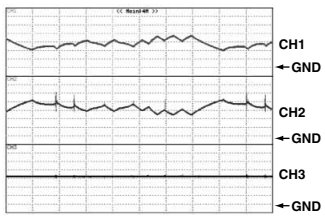


SUB ADDRESS A, B ASSY

① **CH1 : IC8801 - pin 3**
CH2 : IC8801 - pin 7
CH3 : IC8802 - pin 1
V: 2V/div. H: 2msec/div.
(Input : VIDEO, Signal : Color bar)

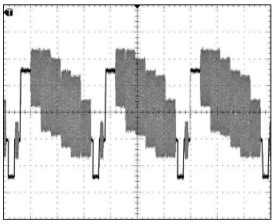


② **CH1 : IC8801 - pin 3**
CH2 : IC8801 - pin 7
CH3 : IC8802 - pin 1
V: 2V/div. H: 2msec/div.
(Input : VIDEO, Signal : Color bar)

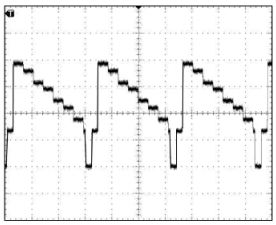


VIDEO CARD (PDA-5002)

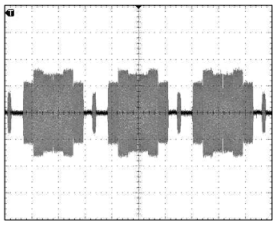
(1) IC7002 - pin 7 (VY)
V: 200mV/div. H: 20µsec/div.
(INPUT4, NTSC Color-Bar)



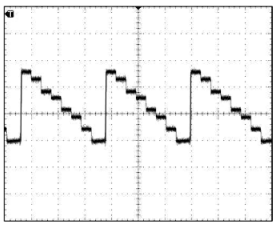
(2) K7201 (3DY)
V: 200mV/div. H: 20µsec/div.
(INPUT4, NTSC Color-Bar)



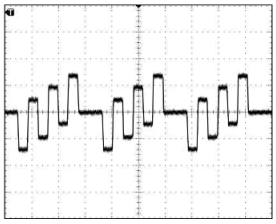
(3) K7202 (3DC)
V: 200mV/div. H: 20µsec/div.
(INPUT4, NTSC Color-Bar)



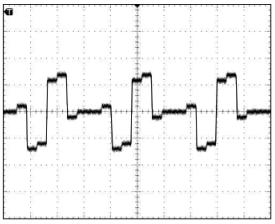
(4) K7303 (Y)
V: 200mV/div. H: 20µsec/div.
(INPUT4, NTSC Color-Bar)



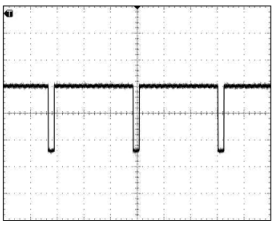
(5) K7302 (CB)
V: 200mV/div. H: 20µsec/div.
(INPUT4, NTSC Color-Bar)



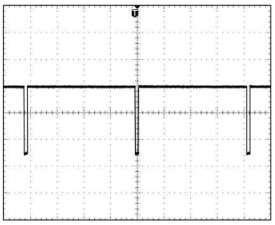
(6) K7301 (CR)
V: 200mV/div. H: 20µsec/div.
(INPUT4, NTSC Color-Bar)



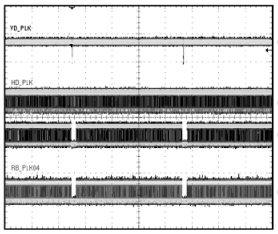
(7) IC7303 - pin 7 (HDPLD)
V: 2V/div. H: 20µsec/div.
(INPUT4, NTSC Color-Bar)



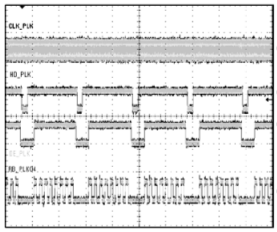
(8) IC7303 - pin 5 (VDPLD)
V: 2V/div. H: 4msec/div.
(INPUT4, NTSC Color-Bar)



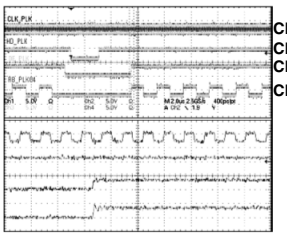
(9) CH1 : IC7408 - pin 14 (VD_PLK)
CH2 : IC7408 - pin 15 (HD_PLK)
CH3 : IC7408 - pin 17 (DE_PLK)
CH4 : IC7408 - pin 15 (RB_PLKO4)
V: 5V/div. H: 4msec/div.
(INPUT5, VESA, 1024 × 768@60Hz, RAMP)



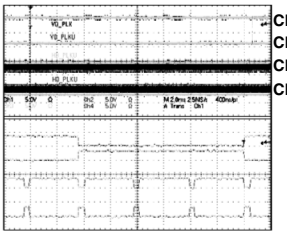
(10) CH1 : IC7408 - pin 18 (CLK_PLK)
CH2 : IC7408 - pin 15 (HD_PLK)
CH3 : IC7408 - pin 17 (DE_PLK)
CH4 : IC7408 - pin 15 (RB_PLKO4)
V: 5V/div. H: 10µsec/div.
(INPUT5, VESA, 1024 × 768@60Hz, RAMP)



(11) CH1 : IC7408 - pin 18 (CLK_PLK)
CH2 : IC7408 - pin 15 (HD_PLK)
CH3 : IC7408 - pin 17 (DE_PLK)
CH4 : IC7408 - pin 15 (RB_PLKO4)
V: 5V/div. H: 40nsec/div.
(INPUT5, VESA, 1024 × 768@60Hz, RAMP)

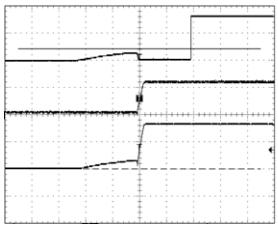
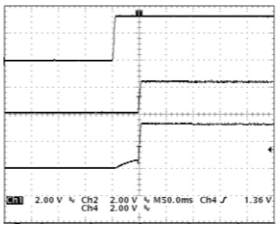
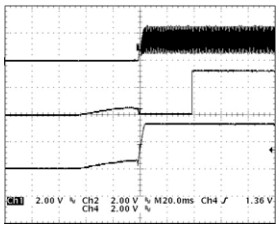
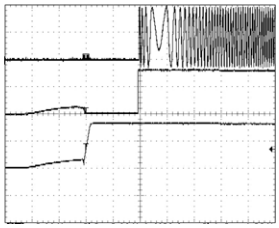


(12) CH1 : IC7408 - pin 14 (VD_PLK)
CH2 : IC7410 - pin 5 (VD_PLKU)
CH3 : IC7408 - pin 15 (HD_PLK)
CH4 : IC7410 - pin 7 (HD_PLKU)
V: 5V/div. H: 2msec/div.
(INPUT5, VESA, 1024 × 768@60Hz, RAMP)

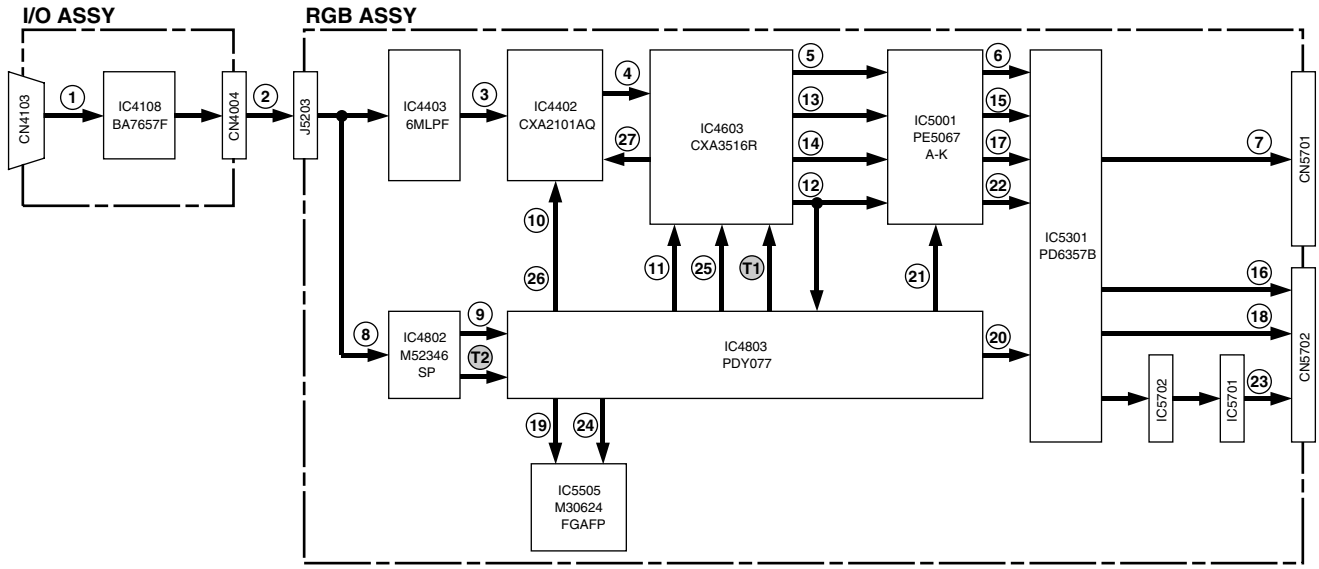


RGB VIDEO Signal Waveforms

● Waveform at Power ON

Reset 2, D+2.5V, D+3.3V V: 2V/div. H: 20msec/div.	A+3.3V, D+2.5V, D+3.3V V: 2V/div. H: 50msec/div.	Wide UCOM, Reset 2, D+3.3V V: 2V/div. H: 20msec/div.	IC100 clk, Reset 2, D+3.3V V: 2V/div. H: 20msec/div.
			

● Measurement Point



● Trigger Signal

T1 K4805 (HD_PLL) : For Horizonatal Sync. Signal
T2 IC4802 - pin 13 : For Vertical Sync. Signal

● Measurement Condition

① to ㉗ :

Input	: INPUT 1 (Component)
Input Signal	: 480i
Signal Pattern	: H RAMP
Screen Mode	: WIDE
Clamp Mode	: AUTO
Color Mode	: COLOR MODE 1

㉘ to ㉙ :

Input	: INPUT 2 (RGBHV)
Input Signal	: XGA@60Hz
Signal Pattern	: Monoscope
Screen Mode	: FULL
Clamp Mode	: AUTO
Color Mode	: COLOR MODE 1

㉚ to ㉛ :

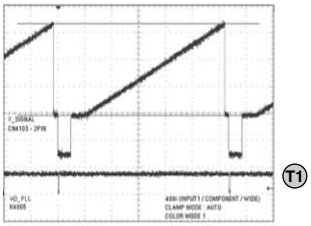
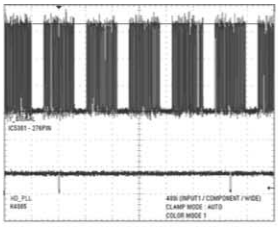
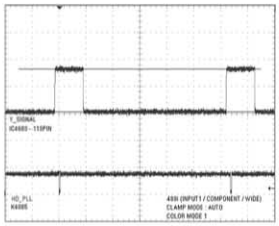
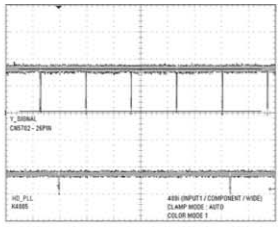
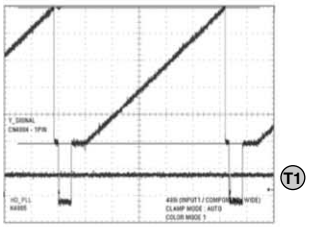
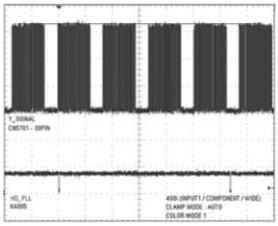
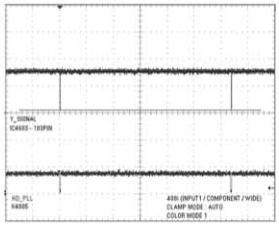
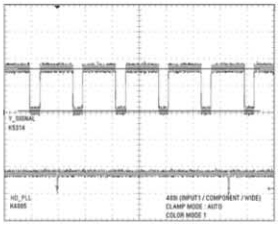
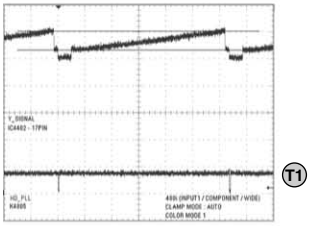
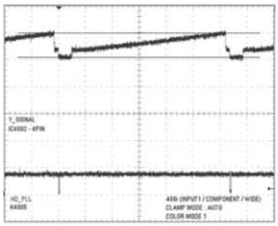
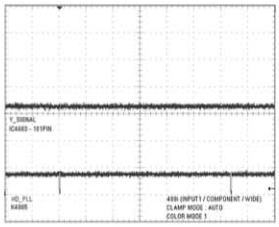
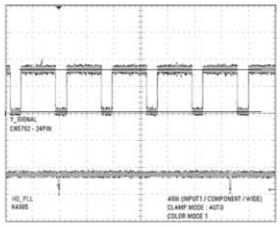
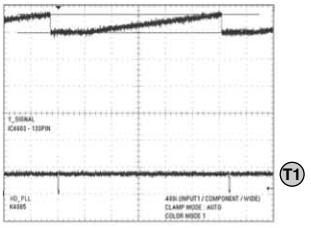
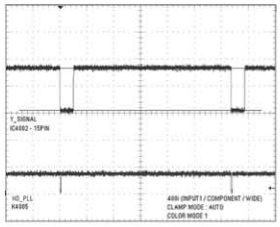
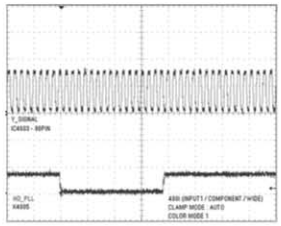
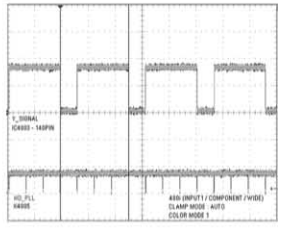
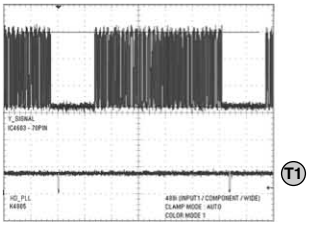
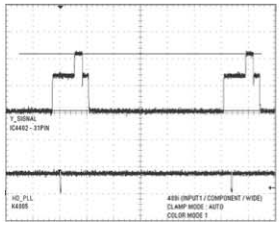
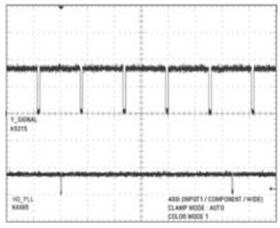
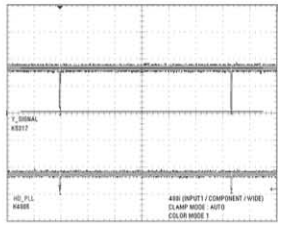
Input	: INPUT 5 (DVI)
Input Signal	: XGA@60Hz
Signal Pattern	: Monoscope
Screen Mode	: FULL
Clamp Mode	: AUTO
Color Mode	: COLOR MODE 1

㉜ to ㉝ :

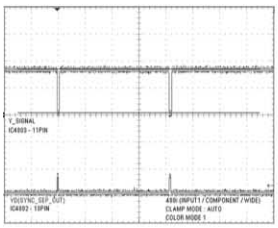
Input	: INPUT 2 (RGBHV)
Input Signal	: 1125i
Signal Pattern	: Monoscope
Screen Mode	: FULL
Clamp Mode	: AUTO
Color Mode	: COLOR MODE 1

● **Information**

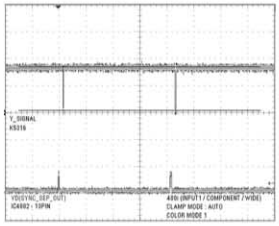
NO.	Point	Information	Trigger Signal (CH4)
1	CN4103 - pin 2	Synchronize with K4805 (HD_PLL)	T1
2	CN4004 - pin 1	Synchronize with K4805 (HD_PLL)	T1
3	IC4402 - pin 17	Synchronize with K4805 (HD_PLL)	T1
4	IC4603 - pin 133	Synchronize with K4805 (HD_PLL)	T1
5	IC4603 - pin 70	Synchronize with K4805 (HD_PLL)	T1
6	IC5301 - pin 276	Synchronize with K4805 (HD_PLL) and frequency is 4 times.	T1
7	IC5701 - pin 30	Do not synchronize with K4805 (HD_PLL)	T1
8	IC4802 - pin 4	Synchronize with K4805 (HD_PLL)	T1
9	IC4802 - pin 15	Synchronize with K4805 (HD_PLL)	T1
10	IC4402 - pin 31	Synchronize with K4805 (HD_PLL)	T1
11	IC4603 - pin 113	Synchronize with K4805 (HD_PLL)	T1
12	IC4603 - pin 103	Synchronize with K4805 (HD_PLL)	T1
13	IC4603 - pin 101	No output	T1
14	IC4603 - pin 98	Clock signal that synchronizes with K4805 (HD_PLL)	T1
15	K5315 (HD_SEL)	Synchronize with K4805 (HD_PLL) and frequency is 4 times.	T1
16	CN5702 - pin 26	Do not synchronize with K4805 (HD_PLL)	T1
17	K5314 (DE_SEL)	Synchronize with K4805 (HD_PLL) and frequency is 4 times.	T1
18	CN5702 - pin 24	Do not synchronize with K4805 (HD_PLL)	T1
19	IC4803 - pin 140	Synchronize with K4805 (HD_PLL) and frequency is 1/4 times.	T1
20	K5317 (HD_SEL)	Synchronize with K4805 (HD_PLL)	T1
21	IC4803 - pin 11	Synchronize with IC4802 - pin 13	T2
22	K5316 (VD_SEL)	Synchronize with IC4802 - pin 13	T2
23	CN5702 - pin 28	Synchronize with IC4802 - pin 13	T2
24	IC4803 - pin 139	Synchronize with IC4802 - pin 13	T2
25	K4806	Synchronize with IC4802 - pin 13	T2
26	IC4402 - pin 31	Synchronize with IC4802 - pin 13	T2
27	K4603 (Y_SIGNAL)	Synchronize with IC4802 - pin 13	T2
28	K5314 (DE_SEL) K5315 (HD_SEL) K5316 (VD_SEL) K5317 (HD_30)	K5314 (DE_SEL) is fixed to "L" level in the PC signal indication. K5315 (HD_SEL) and k 5317 (HD _ 30) synchronize with K5316 (VD_SEL).	K5316 (VD_SEL)
29	K5314 (DE_SEL) K5315 (HD_SEL) K5316 (VD_SEL) K5317 (HD_30)	Magnified K5316 (VD_SEL) section of No. 28. K5315 (HD_SEL) and K5317 (HD _ 30) are the same frequency in the PC signal indication.	K5316 (VD_SEL)
30	K5314 (DE_SEL) K5315 (HD_SEL) K5316 (VD_SEL) K5317 (HD_30)	K5314 (DE_SEL) is not fixed to "L" level in the PC signal indication by the DVI input. K5314 (DE_SEL), K5315 (HD_SEL) and k 5317 (HD_30) synchronize with K5316 (VD_SEL).	K5316 (VD_SEL)
31	K5314 (DE_SEL) K5315 (HD_SEL) K5316 (VD_SEL) K5317 (HD_30)	Magnified K5316 (VD_SEL) section of No. 30. K5314 (DE_SEL), K5315 (HD_SEL) and K5317 (HD_30) are the same frequency in the PC signal indication by the DVI input.	K5316 (VD_SEL)
32	K5314 (DE_SEL) K5315 (HD_SEL) K5316 (VD_SEL) K5317 (HD_30)	K5314 (DE_SEL) is not fixed to "L" level in the 1125i indication. K5314 (DE_SEL), K5315 (HD_SEL) and k 5317 (HD _ 30) synchronize with K5316 (VD_SEL).	K5316 (VD_SEL)
33	K5314 (DE_SEL) K5315 (HD_SEL) K5316 (VD_SEL) K5317 (HD_30)	Magnified K5316 (VD_SEL) section of No. 32. Frequency of 2 times of K5314 (DE_SEL), K5315 (HD_SEL) and K5317 (HD_30) in the 1125i indication.	K5316 (VD_SEL)

1 **CN4103 - pin 2** V: 200mV/div. H: 10µsec/div. 	**6** **IC5301 - pin 276** V: 1V/div. H: 10µsec/div. 	**11** **IC4603 - pin 113** V: 2V/div. H: 10µsec/div. 	**16** **CN5702 - pin 26** V: 2V/div. H: 10µsec/div. 
2 **CN4004 - pin 1** V: 200mV/div. H: 10µsec/div. 	**7** **IC5701 - pin 30** V: 1V/div. H: 10µsec/div. 	**12** **IC4603 - pin 103** V: 2V/div. H: 10µsec/div. 	**17** **K5315** V: 2V/div. H: 10µsec/div. 
3 **IC4402 - pin 17** V: 1V/div. H: 10µsec/div. 	**8** **IC4802 - pin 4** V: 2V/div. H: 10µsec/div. 	**13** **IC4603 - pin 101** V: 2V/div. H: 10µsec/div. 	**18** **CN5702 - pin 24** V: 2V/div. H: 10µsec/div. 
4 **IC4603 - pin 133** V: 1V/div. H: 10µsec/div. 	**9** **IC4802 - pin 15** V: 2V/div. H: 10µsec/div. 	**14** **IC4603 - pin 98** V: 2V/div. H: 80msec/div. 	**19** **IC4803 - pin 140** V: 2V/div. H: 100µsec/div. 
5 **IC4603 - pin 70** V: 1V/div. H: 10µsec/div. 	**10** **IC4402 - pin 31** V: 2V/div. H: 10µsec/div. 	**15** **K5315** V: 2V/div. H: 10µsec/div. 	**20** **K5317** V: 2V/div. H: 10µsec/div. 

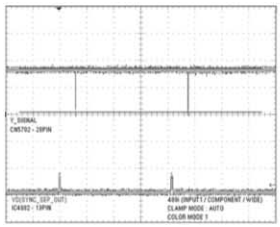
21 **IC4803 - pin 11**
V: 200mV/div. H: 4msec/div.



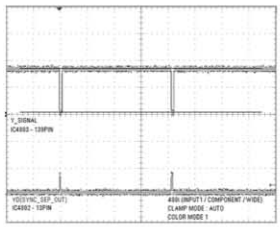
22 **K5316**
V: 200mV/div. H: 4msec/div.



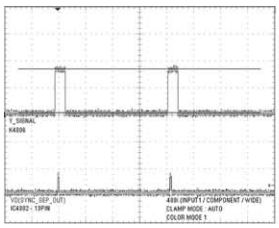
23 **CN5702 - pin 28**
V: 200mV/div. H: 4msec/div.



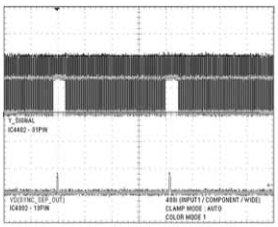
24 **IC4803 - pin 139**
V: 200mV/div. 4msec/div.



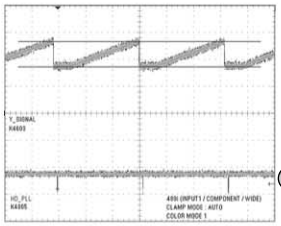
25 **K4806**
V: 200mV/div. H: 4msec/div.



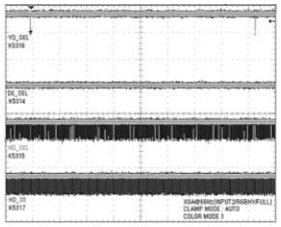
26 **IC4402 - pin 31**
V: 200mV/div. H: 4msec/div.



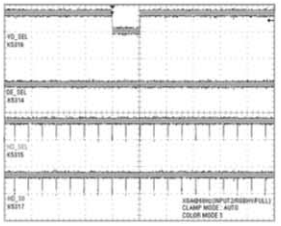
27 **K4603 (Y_SIGNAL)**
V: 1V/div. H: 20µsec/div.



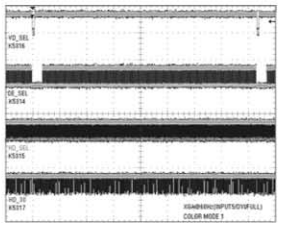
28 **K5314 (DE_SEL), K5315 (HD_SEL), K5316 (VD_SEL), K5317 (HD_30)**
V: 5V/div. H: 2msec/div.



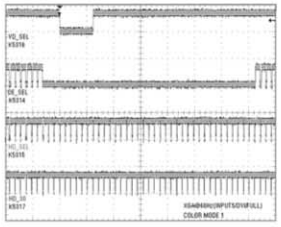
29 **K5314 (DE_SEL), K5315 (HD_SEL), K5316 (VD_SEL), K5317 (HD_30)**
V: 5V/div. H: 40µsec/div.



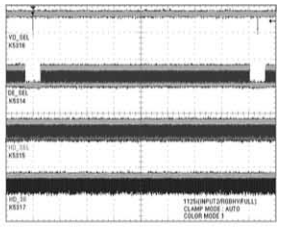
30 **K5314 (DE_SEL), K5315 (HD_SEL), K5316 (VD_SEL), K5317 (HD_30)**
V: 5V/div. H: 2msec/div.



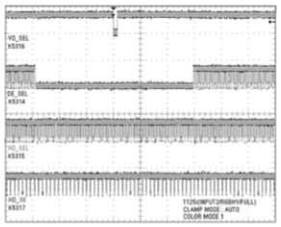
31 **K5314 (DE_SEL), K5315 (HD_SEL), K5316 (VD_SEL), K5317 (HD_30)**
V: 5V/div. H: 100µsec/div.



32 **K5314 (DE_SEL), K5315 (HD_SEL), K5316 (VD_SEL), K5317 (HD_30)**
V: 5V/div. H: 2msec/div.



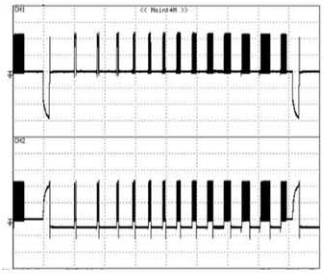
33 **K5314 (DE_SEL), K5315 (HD_SEL), K5316 (VD_SEL), K5317 (HD_30)**
V: 5V/div. H: 200µsec/div.



Sustain Waveforms

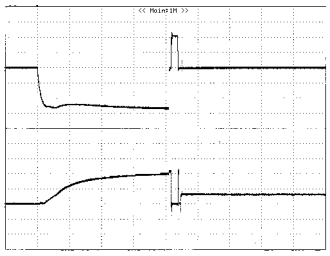
● Sustain Waveform (1 field)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 100V/div. H: 2msec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 2msec/div.



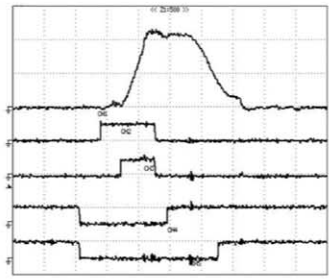
● Reset Waveform

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 100V/div. H: 100µsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 100µsec/div.



● Sustain Waveform

ch 1 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 500nsec/div.
ch 2 : K2028 (YSUS_U) - K2024 (DGND)
V: 10V/div. H: 500nsec/div.
ch 3 : K2027 (YSUS_B) - K2024 (DGND)
V: 10V/div. H: 500nsec/div.
ch 4 : K2029 (YSUS_D) - K2024 (DGND)
V: 10V/div. H: 500nsec/div.
ch 5 : K2037 (YSUS_G) - K2024 (DGND)
V: 10V/div. H: 500nsec/div.

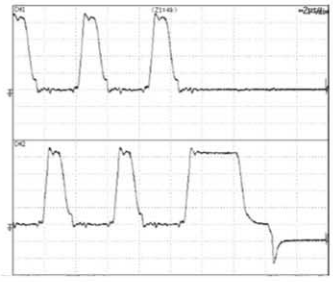


● Sustain Waveform (first half)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 50V/div. H: 5µsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 50V/div. H: 5µsec/div.

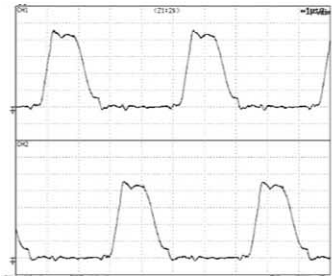
● Sustain Waveform (second half)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 50V/div. H: 2µsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 50V/div. H: 2µsec/div.



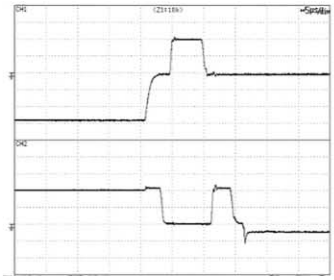
● Sustain Waveform (middle)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 50V/div. H: 1µsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 50V/div. H: 1µsec/div.



● Reset Waveform (second half)

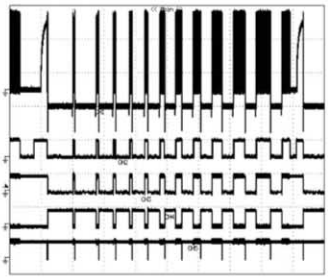
ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 100V/div. H: 5µsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 5µsec/div.



Drive Pulse Waveforms

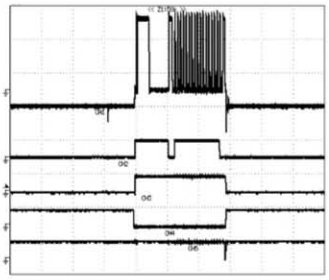
● Y Drive Pulse Control Waveform (1 field)

ch 1 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 2msec/div.
ch 2 : K2039 (YCP_MSK) - K2024 (DGND)
V: 10V/div. H: 2msec/div.
ch 3 : K2040 (YSUS_MSK) - K2024 (DGND)
V: 10V/div. H: 2msec/div.
ch 4 : K2041 (OFS) - K2024 (DGND)
V: 10V/div. H: 2msec/div.
ch 5 : K2053 (SOFT_D) - K2024 (DGND)
V: 10V/div. H: 2msec/div.



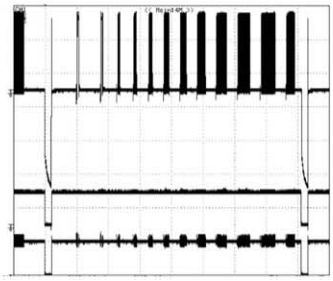
● Y Drive Pulse Control Waveform (1 sub-field)

ch 1 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 50µsec/div.
ch 2 : K2039 (YCP_MSK) - K2024 (DGND)
V: 10V/div. H: 50µsec/div.
ch 3 : K2040 (YSUS_MSK) - K2024 (DGND)
V: 10V/div. H: 50µsec/div.
ch 4 : K2041 (OFS) - K2024 (DGND)
V: 10V/div. H: 50µsec/div.
ch 5 : K2053 (SOFT_D) - K2024 (DGND)
V: 10V/div. H: 50µsec/div.



● X Drive Pulse Control Waveform (1 field)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 100V/div. H: 2msec/div.
ch 2 : K3017 (XCP_MSK) - K3005 (DGND)
V: 10V/div. H: 2msec/div.
ch 3 : K3015 (XSUS_MSK) - K3005 (DGND)
V: 5V/div. H: 2msec/div.



5. PCB PARTS LIST

NOTES :
- *Parts marked by "* NSP *" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560 Ω → 56 × 10 [1] → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 × 10 [3] → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 × 10 [1] → 5621 ..... RN1/4PC 5 6 2 1 F

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
NSP		SCAN FUKUGO ASSY	AWV1927
NSP		├SCAN (A) ASSY	AWZ6666
NSP		├SCAN (B) ASSY	AWZ6667
NSP		├X CONNECTOR (A) ASSY	AWZ6672
NSP		├X CONNECTOR (B) ASSY	AWZ6673
NSP		├BRIDGE A ASSY	AWZ6674
NSP		├BRIDGE B ASSY	AWZ6675
NSP		├BRIDGE C ASSY	AWZ6676
NSP		└BRIDGE D ASSY	AWZ6677
NSP		ADDRESS FUKUGO ASSY	AWV1928
NSP		├ADR CONNECT A ASSY	AWZ6678
NSP		├ADR CONNECT B ASSY	AWZ6679
NSP		├ADR CONNECT C ASSY	AWZ6680
NSP		├ADR CONNECT D ASSY	AWZ6681
NSP		└ADR RESONANCE ASSY	AWZ6682
		X DRIVE ASSY	AWV1930
NSP		Y DRIVE ASSY	AWV1938
		├SLOT CONNECTOR ASSY	AWZ6634
		├Y DRIVE ASSY	AWZ6683
		├SUB ADDRESS A ASSY	AWZ6692
		└SUB ADDRESS B ASSY	AWZ6693
		DIGITAL VIDEO ASSY	AWV1941
		RGB VIDEO ASSY	AWV1939
		├I/O ASSY	AWZ6631
		└RGB ASSY	AWZ6697
		MX FUKUGO ASSY	AWV1905
		├CONTROL ASSY	AWZ6633
		├SP OUT L ASSY	AWZ6635
		├SP OUT R ASSY	AWZ6636
		├SIDE KEY ASSY	AWZ6637
		├THERMAL SENSOR ASSY	AWZ6639
		├MX LED ASSY	AWZ6642
		├IR ASSY	AWZ6643
		├MX AUDIO ASSY	AWZ6644
		└KEY CONNECTOR ASSY	AWZ6695

\SCAN (A) ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
		IC6201-IC6206	SN755860PJ

CAPACITORS

Mark	No.	Description	Part No.
		C6201,C6202,C6212,C6213 (0.1µF/250V)	ACG1088
		C6222,C6223,C6232,C6233 (0.1µF/250V)	ACG1088
		C6242,C6243,C6252,C6253 (0.1µF/250V)	ACG1088
		C6203,C6205,C6206,C6210,C6215	CCSRCH151J50
		C6219,C6220,C6227,C6229,C6231	CCSRCH151J50
		C6235,C6236,C6240,C6244,C6246	CCSRCH151J50
		C6251,C6255,C6259,C6260	CCSRCH151J50
		C6262-C6266	CCSRCH151J50
		C6208,C6209,C6217,C6218,C6226	CCSRCH181J50
		C6230,C6238,C6239,C6245,C6250	CCSRCH181J50
		C6257,C6258	CCSRCH181J50
		C6204,C6207,C6214,C6216	CCSRCH390J50
		C6224,C6225,C6234,C6237	CCSRCH390J50
		C6248,C6249,C6254,C6256	CCSRCH390J50
		C6211,C6221,C6228,C6241,C6247	CKSRYF104Z16
		C6261	CKSRYF104Z16

RESISTORS

Mark	No.	Description	Part No.
		R6207,R6209,R6222,R6228,R6232	RAB4C221J
		R6239	RAB4C221J
		Other Resistors	RS1/16S□□□J

OTHERS

Mark	No.	Description	Part No.
	CN6201	15P CONNECTOR	AKP1218
	K6202,K6212,K6219,K6225,K6231	TEST PIN	AKX9002
	K6239,K6244	TEST PIN	AKX9002

Mark	No.	Description	Part No.

SCAN (B) ASSY

SEMICONDUCTORS

	IC6001-IC6006		SN755860PJ

CAPACITORS

	C6001,C6002,C6011,C6012 (0.1µF/250V)		ACG1088
	C6021,C6022,C6031,C6032 (0.1µF/250V)		ACG1088
	C6041,C6042,C6051,C6052 (0.1µF/250V)		ACG1088
	C6004,C6005,C6009,C6013,C6015		CCSRCH151J50
	C6020,C6026,C6027,C6029,C6033		CCSRCH151J50
	C6038,C6040,C6044,C6048,C6049		CCSRCH151J50
	C6054,C6058-C6060,C6062-C6066		CCSRCH151J50
	C6007,C6008,C6014,C6019,C6025		CCSRCH181J50
	C6028,C6035,C6039,C6046,C6047		CCSRCH181J50
	C6056,C6057		CCSRCH181J50
	C6003,C6006,C6017,C6018		CCSRCH390J50
	C6023,C6024,C6034,C6037,C6043		CCSRCH390J50
	C6045,C6053,C6055		CCSRCH390J50
	C6010,C6016,C6030,C6036,C6050		CKSRYF104Z16
	C6061		CKSRYF104Z16

RESISTORS

	R6007,R6012,R6021,R6028,R6032		RAB4C221J
	R6040		RAB4C221J
	Other Resistors		RS1/16S□□□J

OTHERS

	CN6001	15P CONNECTOR	AKP1218
	K6001,K6012,K6018,K6025,K6031	TEST PIN	AKX9002
	K6038,K6044	TEST PIN	AKX9002

X CONNECTOR (A) ASSY

RESISTORS

	All Resistors		RS1/16S□□□J

X CONNECTOR (B) ASSY

RESISTORS

	All Resistors		RS1/16S□□□J

BRIDGE A ASSY

SEMICONDUCTOR

	D6421		D1FL20U(S)

CAPACITOR

	C6421 (0.1µF/100V)		ACG1098

OTHERS

	CN6421	PH CONNECTOR	B4B-PH-SM3

Mark	No.	Description	Part No.

BRIDGE B ASSY

SEMICONDUCTOR

	D6431		D1FL20U(S)

CAPACITOR

	C6431 (0.1µF/100V)		ACG1098

OTHERS

	CN6431	PH CONNECTOR	B4B-PH-SM3

BRIDGE C ASSY

SEMICONDUCTOR

	D6441		D1FL20U(S)

CAPACITOR

	C6441 (0.1µF/100V)		ACG1098

OTHERS

	CN6441	PH CONNECTOR	B4B-PH-SM3

BRIDGE D ASSY

SEMICONDUCTOR

	D6451		D1FL20U(S)

CAPACITOR

	C6451 (0.1µF/100V)		ACG1098

OTHERS

	CN6451	PH CONNECTOR	B4B-PH-SM3

ADR CONNECT A ASSY

SEMICONDUCTORS

	IC6501		TC74VHC541FT
	Q6502		2SC2712
	Q6503		2SK209
	D6501		DA227

COILS

	L6501,L6502 (22µH/0.11A)		ATH1081

CAPACITORS

	C6504,C6513-C6520,C6528 (330pF/100V)		ACG1094
	C6531,C6533,C6534 (47µF/6.3V)		ACH1341
	C6536-C6538		CCSRCH121J50
	C6507-C6510,C6522-C6525,C6532		CKSRYF104Z16
	C6535		CKSRYF104Z16

RESISTORS

	R6519-R6522,R6526,R6528		RAB4C100J
	R6530,R6531,R6534-R6537,R6541		RAB4C100J
	R6543,R6545,R6547		RAB4C100J
	R6516		RAB4C473J
	Other Resistors		RS1/16S□□□J

OTHERS

	CN6501	55P CONNECTOR	AKM1202

Mark	No.	Description	Part No.

ADR CONNECT B ASSY

SEMICONDUCTORS

	IC6601		TC74VHC541FT
	Q6602		2SC2712
	Q6603		2SK209
	D6601		DA227

COILS

	L6601,L6602 (22µH/0.11A)		ATH1081

CAPACITORS

	C6604,C6613-C6620,C6628 (330pF/100V)		ACG1094
	C6631,C6633,C6634 (47µF/6.3V)		ACH1341
	C6636-C6638		CCSRCH121J50
	C6607-C6610,C6622-C6625,C6632		CKSRYF104Z16
	C6635		CKSRYF104Z16

RESISTORS

	R6619-R6622,R6626,R6628		RAB4C100J
	R6630,R6631,R6634-R6637,R6641		RAB4C100J
	R6643,R6645,R6647		RAB4C100J
	R6616		RAB4C473J
	Other Resistors		RS1/16S□□□J

OTHERS

	CN6601	55P CONNECTOR	AKM1202

ADR CONNECT C ASSY

SEMICONDUCTORS

	IC6801		TC74VHC541FT
	Q6802		2SC2712
	Q6803		2SK209
	D6801		DA227

COILS

	L6801,L6802 (22µH/0.11A)		ATH1081

CAPACITORS

	C6804,C6813-C6820,C6828 (330pF/100V)		ACG1094
	C6831,C6833,C6834 (47µF/6.3V)		ACH1341
	C6836-C6838		CCSRCH121J50
	C6807-C6810,C6822-C6825,C6832		CKSRYF104Z16
	C6835		CKSRYF104Z16

RESISTORS

	R6819-R6822,R6826,R6828		RAB4C100J
	R6830,R6831,R6834-R6837,R6841		RAB4C100J
	R6843,R6845,R6847		RAB4C100J
	R6816		RAB4C473J
	Other Resistors		RS1/16S□□□J

OTHERS

	CN6801	55P CONNECTOR	AKM1202

Mark	No.	Description	Part No.

ADR CONNECT D ASSY

SEMICONDUCTORS

	IC6901		TC74VHC541FT
	Q6902		2SC2712
	Q6903		2SK209
	D6901		DA227

COILS

	L6901,L6902 (22µH/0.11A)		ATH1081

CAPACITORS

	C6904,C6913-C6920,C6928 (330pF/100V)		ACG1094
	C6931,C6933,C6934 (47µF/6.3V)		ACH1341
	C6936-C6938		CCSRCH121J50
	C6907-C6910,C6922-C6925,C6932		CKSRYF104Z16
	C6935		CKSRYF104Z16

RESISTORS

	R6919-R6922,R6926,R6928		RAB4C100J
	R6930,R6931,R6934-R6937,R6941		RAB4C100J
	R6943,R6945,R6947		RAB4C100J
	R6916		RAB4C473J
	Other Resistors		RS1/16S□□□J

OTHERS

	CN6901	55P CONNECTOR	AKM1202

ADR RESONANCE ASSY

SEMICONDUCTORS

⚠	IC6704		ICP-S1.0
	IC6701-IC6703		TND301S
	Q6704,Q6705,Q6712		2SB1132
	Q6701-Q6703		2SD1664
	Q6710,Q6711		FS30ASJ-2
	Q6706-Q6709		FX20ASJ-2
	D6701,D6703,D6704,D6706		1SS355
	D6709,D6710,D6717,D6718		D1FL20U(S)
	D6711-D6714		SPX-62S
	D6702,D6705,D6716		UDZ15B

COIL

	L6704	CHOKE COIL	ATH1121

CAPACITORS

	C6716,C6718 (1.00F)		ACE1159
	C6720,C6721 (0.1µF/100V)		ACG1101
	C6722 (0.0068F/100V)		ACG1102
	C6703-C6708 (56µF/80V)		ACH1347
	C6701,C6702,C6709		CEHV470M16
	C6710,C6711,C6713		CKSRYF104Z16

RESISTORS

	All Resistors		RS1/16S□□□J

OTHERS

	CN6701	23P CONNECTOR	AKP1221
	CN6702	PH CONNECTOR	B4B-PH-SM3
	CN6703	PH CONNECTOR	B5B-PH-SM3

Mark	No.	Description	Part No.

X DRIVE ASSY

[X LOGIC BLOCK]

SEMICONDUCTORS

	IC3003	PE1012A
	IC3004	TC74ACT540FT
	IC3001,IC3008	TC74ACT541FT

COIL

	L3001	LFEA100J

CAPACITORS

	C3005	CEHAT470M16
	C3001,C3003,C3004,C3006	CKSRYF104Z50

RESISTORS

	R3009-R3012	RAB4C0R0J
	R3001,R3003,R3026,R3029	RAB4C470J
	R3002,R3005,R3030,R3033	RAB4C472J
	Other Resistors	RS1/16S□□□J

OTHERS

	CN3001	30P CONNECTOR	KF050HA30L

[X SUS BLOCK]

SEMICONDUCTORS

	IC3102	HCPL-M611
	IC3200,IC3201	STK795-460
	IC3101	TC74ACT541FT
	IC3103,IC3104,IC3106,IC3107	TND301S
	IC3110,IC3113	TND301S
	IC3109	UPC78L05T
	Q3117	2SJ181L
	Q3116,Q3119,Q3120	2SJ522
	Q3101	2SK2503
	Q3103-Q3106,Q3109-Q3114	FS16VS-9
	Q3124-Q3127	FS16VS-9
	Q3123	FS2AS-14A
	Q3122,Q3128	FS7VS-14A
	Q3102,Q3118	HN1B04FU
	D3119	1SS184
	D3108,D3124,D3125,D3130,D3133	1SS355
	D3101,D3102,D3117,D3126,D3131	D1FL40
	D3200,D3202,D3203,D3205	D1FL40
	D3207,D3208,D3210-D3215	D1FL40
	D3120,D3127-D3129,D3135,D3136	UDZ15B

COILS

	L3206,L3207 RADIAL LEAD INDUCTOR	ATH1112
	L3201,L3204 CHOKE COIL	ATH1113
	L3202,L3205,L3210,L3211 CHOKE COIL	ATH1118
	L3101	LFEA100J
	L3107,L3108	LFEA101J
	L3103	LFEA470J

CAPACITORS

	C3205,C3206,C3212,C3213 (1.5μF)	ACE1160
	C3225,C3226 (1.5μF)	ACE1160
	C3131,C3139,C3143 (0.1μF/630V)	ACG1092
	C3223,C3224 (100pF/500V)	ACG1100
	C3132 (47μF/350V)	ACH1346
	C3200-C3202,C3207-C3209 (330μF/315V)	ACH1348
	C3214-C3221	CCSRCH331J50
	C3112,C3133,C3203,C3210	CEHAT101M16
	C3102,C3107,C3115,C3204,C3211	CEHAT101M25
	C3101	CEHAT221M25
	C3104,C3106,C3134,C3141	CEHAT470M16
	C3135	CEHAT470M25
	C3154,C3163	CKSRYB332K50
	C3103,C3105,C3108,C3109,C3111	CKSRYF104Z50
	C3113,C3114,C3117,C3130,C3140	CKSRYF104Z50
	C3147	CKSRYF104Z50

RESISTORS

	VR3200-VR3203 (1kΩ)	ACP1089
	R3183,R3184,R3187	ACN1156
	R3113,R3114,R3121,R3122,R3126	RAB4C100J
	R3132,R3140,R3141	RAB4C100J
	R3212,R3217,R3230,R3234,R3237	RS1/10S184J
	R3240,R3242,R3245	RS1/10S184J
	R3250-R3253	RS1/16S3300F
	R3134,R3163	RS1/2S100J
	R3103	RS1/2S102J
	R3109	RS1/2S2R2J
	R3102	RS1/2S561J
	R3215,R3216	RS1MMF101J
	R3228,R3229	RS1MMF122J
	R3202,R3203	RS1MMF563J
	R3178,R3179	RS2MMF181J
	Other Resistors	RS1/16S□□□J

OTHERS

	KN3105-KN3114	GROUND PLATE	ANK-142
	CN3101	13P PLUG	KM250MA13

[X DD CON BLOCK]

SEMICONDUCTORS

	IC3712	AN1431M
	IC3701	MIP161
	IC3702-IC3704	TLP181(GR)
	Q3701	2SC2712
	Q3800	HN1A01FU
	D3710,D3711	1SS355
	D3705,D3706	D1FL20U(S)
	D3702	EC8FS6
	D3708,D3709,D3713	RD110P
	D3703	UDZ18B
	D3707	UDZS5.6B

COIL

	L3701	RADIAL LEAD INDUCTOR	ATH1110

Mark	No.	Description	Part No.
TRANSFORMER			
	T3701		ATK1153
CAPACITORS			
	C3701 (22μF/315V)		ACH1345
	C3717 (47μF/315V)		ACH1346
	C3704		CEHAT101M16
	C3706,C3711,C3714		CEHAT101M25
	C3712		CEHAT331M16
	C3705		CKSQYF104Z50
	C3703,C3707,C3708,C3710		CKSRYB104K16
	C3715,C3716		CKSRYB104K16
RESISTORS			
	VR3701 (1kΩ)		ACP1089
	R3732		RS1/16S1001F
	R3806		RS1/16S1802F
	R3701-R3704,R3706-R3717		RS1/16S1803F
	R3805		RS1/16S2702F
	R3731		RS1/16S3900F
	R3802		RS1/16S5601F
	R3738,R3739		RS1/2S102J
	R3800,R3801		RS1/2S823J
	Other Resistors		RS1/16S□□□J

Y DRIVE ASSY

[Y DRIVE LOGIC BLOCK]

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC2006		PE1013B
	IC2007		TC74ACT540FT
	IC2001,IC2003-IC2005		TC74ACT541FT
	Q2121		2SK2201
	Q2101,Q2102		HN1C01FU
	D2101		1SS355
COIL			
	L2001		LFEA100J
CAPACITORS			
	C2101		CEHAT100M50
	C2103		CEHAT1R0M50
	C2003		CEHAT470M16
	C2001,C2004,C2005,C2007,C2008		CKSRYF104Z50
	C2010,C2102,C2104,C2121		CKSRYF104Z50
RESISTORS			
	R2015-R2018		RAB4C0R0J
	R2001,R2002,R2005,R2011		RAB4C470J
	R2037,R2038		RAB4C470J
	R2035,R2036,R2039,R2040		RAB4C472J
	Other Resistors		RS1/16S□□□J
OTHERS			
	CN2001	50P CONNECTOR	AKM1201
	2101	SENSOR	AXX1057

[Y DRIVE SUS BLOCK]

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC2202,IC2208		HCPL-M611
	IC2206,IC2214		STK795-460
	IC2201		TC74ACT541FT
	IC2203,IC2204,IC2210,IC2212		TND301S
	IC2213,IC2216,IC2217		TND301S
	IC2205,IC2209		UPC78L05T
	Q2203-Q2205		2SJ522
	Q2201		2SK2503
	Q2215,Q2217-Q2221,Q2226,Q2227		FQB34N20
	Q2232,Q2233		FQB34N20
	Q2210-Q2212		FS16VS-9
	Q2209		HN1B04FU
	D2225		1SS184
	D2202,D2204		1SS226
	D2211		1SS355
	D2201		D1FL20U(S)
	D2203,D2205,D2208,D2210,D2212		D1FL40
	D2214-D2216,D2221-D2223		D1FL40
	D2226-D2228,D2239,D2243		D1FL40
	D2209		DF20L60
	D2206,D2207		UDZ15B
COILS			
	L2207	RADIAL LEAD INDUCTOR	ATH1110
	L2213,L2214	RADIAL LEAD INDUCTOR	ATH1112
	L2206,L2211	CHOKE COIL	ATH1113
	L2208,L2212,L2215,L2216	CHOKE COIL	ATH1118
	L2210		LFEA100J
	L2203,L2205		LFEA101J
	L2201,L2204		LFEA470J
CAPACITORS			
	C2228,C2230,C2231,C2250-C2252	(1.5μF)	ACE1160
	C2209,C2210 (0.1μF/630V)		ACG1092
	C2233,C2248 (100pF500V)		ACG1100
	C2211 (47μF/350V)		ACH1346
	C2216,C2217,C2219,C2234-C2236	(330μF315)	ACH1348
	C2253-C2260		CCSRCH331J50
	C2221,C2225,C2226,C2246		CEHAT101M16
	C2204,C2227,C2237,C2240,C2247		CEHAT101M25
	C2202		CEHAT221M25
	C2232		CEHAT331M2A
	C2218,C2224,C2229		CEHAT470M16
	C2212,C2214		CEHAT470M25
	C2264,C2270		CKSRYB472K50
	C2201,C2203,C2205,C2208,C2213		CKSRYF104Z50
	C2220,C2222,C2223,C2238,C2239		CKSRYF104Z50
	C2241,C2242		CKSRYF104Z50
RESISTORS			
	VR2201-VR2204 (1kΩ)		ACP1089
	R2235,R2273,R2291,R2305,R2315		RAB4C100J
	R2317,R2342		RAB4C100J
	R2253,R2256,R2270,R2283,R2332		RS1/10S184J
	R2338,R2354,R2355		RS1/10S184J

Mark	No.	Description	Part No.
	R2358-R2361		RS1/16S3300F
	R2263,R2264		RS1/2S100J
	R2203		RS1/2S102J
	R2209		RS1/2S2R2J
	R2202		RS1/2S561J
	R2278,R2303		RS1MMF101J
	R2233,R2234		RS1MMF152J
	R2274,R2275		RS1MMF471J
	R2298,R2299		RS2MMF3R3J
	R2277		RS3LMFR47J
	R2276		RS3LMFR56J
	Other Resistors		RS1/16S□□□J

OTHERS

	KN2201-KN2210	GROUND PLATE	ANK-142
	CN2201	15P PLUG	KM250MA15
	CN2202	3P PLUG	KM250MA3

[Y DRIVE SCAN BLOCK]

SEMICONDUCTORS

	IC2501,IC2502,IC2505,IC2510	HCPL-M611
	IC2514,IC2516,IC2525	HCPL-M611
	IC2503,IC2504,IC2506	TC74ACT540FT

COILS

	L2501-L2503	LFEA100J

CAPACITORS

	C2506,C2527	CEHAT220M2D
	C2502	CEHAT221M16
	C2524,C2525	CEHAT470M16
	C2501,C2503-C2505,C2507,C2508	CKSRYF104Z50
	C2513,C2517,C2519,C2530	CKSRYF104Z50

RESISTORS

	R2502,R2504	RAB4C101J
	Other Resistors	RS1/16S□□□J

OTHERS

	CN2501,CN2502 15P CONNECTOR	AKM1200

[Y DRIVE DD-CON BLOCK]

SEMICONDUCTORS

	IC2715-IC2717	AN1431M
	IC2709	HCNR201
	IC2708,IC2710,IC2718	M5223AFP
	IC2711	MIP0223SC
	IC2701	MIP161
	IC2704	MIP301
	IC2702,IC2703,IC2705-IC2707	TLP181(GR)
	IC2712-IC2714	TLP181(GR)
	Q2701,Q2703	2SC2712
	Q2704	HN1A01FU
	D2712,D2717,D2718,D2732,D2734	1SS355
	D2736,D2737	1SS355
	D2704,D2706,D2707,D2715,D2726	D1FL20U(S)
	D2728	D1FL20U(S)
	D2702,D2714,D2727	D1FL40

Mark	No.	Description	Part No.
	D2711		D1FS4
	D2725		EC8FS6
	D2733		RD110P
	D2724		U1ZB330
	D2713		U1ZB36
	D2740		UDZ12B
	D2709,D2716		UDZ3.6B
	D2729,D2731		UDZ33B
	D2703,D2710		UDZ36B
	D2720,D2730,D2739		UDZS5.6B

COIL

	L2701	RADIAL LEAD INDUCTOR	ATH1110

TRANSFORMERS

	T2702	ATK1150
	T2703	ATK1151
	T2701	ATK1152

CAPACITORS

	C2701,C2735 (22μF/315V)	ACH1345
	C2706,C2725,C2737	CEHAT101M16
	C2709,C2718,C2720,C2739,C2745	CEHAT101M25
	C2708	CEHAT101M2A
	C2740	CEHAT101M2C
	C2704	CEHAT221M25
	C2715	CEHAT331M16
	C2746	CEHAT331M25
	C2723,C2751	CEHAT470M16
	C2712	CEHAT471M35
	C2711	CKSRYB103K50
	C2705,C2713,C2714,C2719	CKSRYB104K16
	C2721,C2722,C2724,C2727,C2729	CKSRYB104K16
	C2731,C2733,C2736,C2742,C2743	CKSRYB104K16
	C2747-C2749	CKSRYB104K16
	C2728,C2730	CKSRYB471K50
	C2707,C2738	CKSRYF104Z50

RESISTORS

	VR2702,VR2703 (1kΩ)	ACP1089
	VR2701 (2.2kΩ)	ACP1090
	R2735,R2791	RS1/16S1000F
	R2780	RS1/16S1103F
	R2715,R2728,R2733	RS1/16S1201F
	R2787	RS1/16S1302F
	R2766	RS1/16S1501F
	R2785	RS1/16S1503F
	R2777,R2786	RS1/16S1802F
	R2776	RS1/16S2702F
	R2705,R2706,R2709,R2710,R2778	RS1/16S3002F
	R2781	RS1/16S3002F
	R2783	RS1/16S4701F
	R2734,R2736	RS1/16S4702F
	R2779	RS1/16S5102F
	R2773	RS1/16S5601F
	R2784	RS1/16S5602F
	R2782	RS1/16S6801F
	R2744-R2746,R2748-R2753	RS1/16S9102F
	R2711,R2716,R2767,R2770	RS1/2S102J
	R2788,R2792	RS1/2S561J
	R2771,R2772	RS1/2S823J
	R2712	RS3LMF272J
	Other Resistors	RS1/16S□□□J

Mark	No.	Description	Part No.

SLOT CONNECTOR ASSY

OTHERS

	CN8102	SOCKET 120P	AKP1219
	CN8101	PCI SOCKET 120P	AKP1220
	KN8101,KN8102	GROUND PLATE	ANK1664

SUB ADDRESS A ASSY

SEMICONDUCTORS

	IC8801,IC8802,IC8804	M5223AFP
	IC8803	TC74VHC74FT
	Q8802	2SA1163
	Q8804,Q8805,Q8808	2SC2712
	Q8806	2SK209
	D8801-D8803,D8809	1SS355
	D8806,D8807	DA227
	D8808	UDZ27B
	D8804	UDZS5.1B

COILS

	L8801	CHOKE COIL (100µH/0.45A) ATH1074
	L8802,L8803	COIL (22µH/0.11A) ATH1081

CAPACITORS

	C8806	CCSRCH101J50
	C8822	CEHV100M16
	C8804	CEHV100M35
	C8808	CEHV470M16
	C8807	CEVNP2R2M35
	C8802,C8805,C8809-C8817	CKSRYF104Z16
	C8820,C8821	CKSRYF104Z16

RESISTORS

	R8806,R8807,R8837,R8838,R8841	RS1/16S1002D
	R8858	RS1/16S1202D
	R8828,R8829,R8832,R8846,R8864	RS1/16S2202D
	R8826,R8827,R8839,R8840	RS1/16S4701D
	R8833	RS1/16S4702F
	R8859	RS1/16S5602F
	R8801,R8802	RS1/2S1R5J
	R8803-R8805	RS1/2S2R2J
	Other Resistors	RS1/16S□□□J

OTHERS

	CN8803	23P CONNECTOR	AKM1205
	CN8801	PH CONNECTOR	S3B-PH-SM3
	CN8802	PH CONNECTOR	S8B-PH-SM3

SUB ADDRESS B ASSY

SEMICONDUCTORS

	IC8901,IC8902,IC8904	M5223AFP
	IC8903	TC74VHC74FT
	Q8902	2SA1163
	Q8904,Q8905,Q8908	2SC2712
	Q8906	2SK209
	D8901-D8903,D8909	1SS355
	D8906,D8907	DA227
	D8908	UDZ27B
	D8904	UDZS5.1B

Mark	No.	Description	Part No.

COILS

	L8901	CHOKE COIL (100µH/0.45A) ATH1074
	L8902,L8903	COIL (22µH/0.11A) ATH1081

CAPACITORS

	C8906	CCSRCH101J50
	C8922	CEHV100M16
	C8904	CEHV100M35
	C8908	CEHV470M16
	C8907	CEVNP2R2M35
	C8902,C8905,C8909-C8917	CKSRYF104Z16
	C8920,C8921	CKSRYF104Z16

RESISTORS

	R8906,R8907,R8937,R8938,R8941	RS1/16S1002D
	R8958	RS1/16S1202D
	R8928,R8929,R8932,R8946,R8964	RS1/16S2202D
	R8926,R8927,R8939,R8940	RS1/16S4701D
	R8933	RS1/16S4702F
	R8959	RS1/16S5602F
	R8901,R8902	RS1/2S1R5J
	R8903-R8905	RS1/2S2R2J
	Other Resistors	RS1/16S□□□J

OTHERS

	CN8903	23P CONNECTOR	AKM1205
	CN8901	PH CONNECTOR	S3B-PH-SM3
	CN8902	PH CONNECTOR	S8B-PH-SM3

DIGITAL VIDEO ASSY

[INTERFACE BLOCK]

SEMICONDUCTORS

	IC1001-IC1008	TC74VHC541FT

FILTERS

	F1001-F1006	EMI FILTER ATF1194

CAPACITORS

	C1001-C1008	CKSRYF104Z16

RESISTORS

	R1044	RAB4C101J
	R1001-R1007,R1036,R1063-R1069	RAB4C103J
	R1008-R1017,R1019,R1020,R1027	RAB4C470J
	R1032,R1034,R1035,R1037,R1038	RAB4C470J
	R1040-R1043,R1048,R1049	RAB4C470J
	R1051-R1054	RAB4C470J
	Other Resistors	RS1/16S□□□J

OTHERS

	CN1003,CN1004	50P CONNECTOR	AKM1201
	K1001	TEST PIN	AKX9002
	CN1001	PH CONNECTOR	B12B-PH-SM3

Mark	No.	Description	Part No.

[PANEL UCOM BLOCK]

SEMICONDUCTORS

	IC1101	HD64F2328VF
	IC1103	NC7SZ08P5
	IC1102	PST9228N
	Q1101,Q1103	DTC143EK
	D1101	AEL1171

CAPACITORS

	C1123,C1124	CCSRCH7R0D50
	C1101	CEV101M4
	C1102,C1109,C1110,C1112-C1116	CKSRYB102K50
	C1129-C1132	CKSRYB102K50
	C1117,C1121	CKSRYB103K50
	C1120	CKSRYB472K50
	C1103-C1108,C1111,C1118,C1119	CKSRYF104Z16
	C1122,C1125-C1128	CKSRYF104Z16

RESISTORS

	R1104,R1107,R1110,R1113,R1114	RAB4C472J
	R1116,R1121,R1124,R1127,R1129	RAB4C472J
	R1128	RD1/4PU473J
	Other Resistors	RS1/16S□□□J

OTHERS

	K1101-K1104,K1107,K1108 TEST PIN	AKX9002
	X1101 CERAMIC RESONATOR (25MHz)	ASS1160

[MODULE UCOM BLOCK]

SEMICONDUCTORS

	IC1204	24LC04B(I)SN
	IC1208	PST9246N
	IC1202	TC74VHC08FT
	IC1201	TC74VHC21FT
	IC1205	TC74VHC541FT
	IC1203	TC74VHCT541AFT
	IC1206	TC7W126FU
	D1201,D1202	1SS355

CAPACITORS

	C1213,C1243-C1245	CCSRCH470J50
	C1235,C1236	CCSRCH7R0D50
	C1225,C1232	CEV470M6R3
	C1201-C1203,C1206-C1211	CKSRYB102K50
	C1214-C1216,C1218,C1219	CKSRYB102K50
	C1223,C1224,C1226,C1227,C1229	CKSRYB102K50
	C1237,C1238,C1241,C1242,C1247	CKSRYB102K50
	C1234	CKSRYB103K50
	C1233	CKSRYB472K50
	C1204,C1205,C1212,C1217	CKSRYF104Z16
	C1221,C1222,C1228,C1230,C1231	CKSRYF104Z16
	C1239,C1240,C1246,C1248-C1250	CKSRYF104Z16

RESISTORS

	R1209,R1214,R1245	RAB4C101J
	R1242	RAB4C103J
	R1207	RAB4C123J
	R1213,R1216	RAB4C473J
	Other Resistors	RS1/16S□□□J

Mark	No.	Description	Part No.

OTHERS

	X1201 CERAMIC RESONATOR (16MHz)	ASS1159
	CN1203 PH CONNECTOR	B3B-PH-SM3
	CN1201,CN1202 8P PLUG	CKS3130

[DIGITAL BLOCK]

SEMICONDUCTORS

	IC1802	FS781BZB
	IC1704	NC7SZ08P5
	IC1301,IC1401	PD6358A
	IC1703	PE5064A
	IC1501,IC1502,IC1601,IC1602	TC74VCX541FT
	IC1702,IC1801	TC74VHC541FT
	IC1803	TC74VHC74FT
	IC1701	TC74VHCT541AFT
	D1301-D1305	1SS226

FILTERS

	F1301-F1304,F1501-F1505 EMI FILTER	ATF1194
	F1601-F1605 EMI FILTER	ATF1194

CAPACITORS

	C1807	CCSRCH271J50
	C1802	CEV100M16
	C1306,C1322,C1406,C1422,C1711	CEV101M4
	C1806	CEV101M4
	C1504-C1508,C1604-C1608,C1712	CKSRYB102K50
	C1303-C1305,C1307-C1321	CKSRYF104Z16
	C1323-C1336,C1403-C1405	CKSRYF104Z16
	C1407-C1421,C1423-C1436,C1501	CKSRYF104Z16
	C1503,C1601,C1603,C1701-C1710	CKSRYF104Z16
	C1713,C1803-C1805	CKSRYF104Z16

CAPACITORS

	R1502,R1517,R1606,R1622	RAB4C101J
	R1307,R1310-R1315,R1317,R1318	RAB4C220J
	R1321,R1322,R1326-R1344,R1407	RAB4C220J
	R1410-R1415,R1417,R1418	RAB4C220J
	R1421,R1422,R1426-R1444	RAB4C220J
	R1501,R1514,R1607,R1627,R1701	RAB4C470J
	R1703-R1709,R1712-R1717	RAB4C470J
	R1551,R1552	RS1/2S680J
	Other Resistors	RS1/16S□□□J

OTHERS

	X1801 CRYSTAL RESONATOR (50.000MHz)	ASS1146
	CN1701 50P CONNECTOR	AKM1201
	CN1501,CN1502,CN1504,CN1505 55P CONNECTOR	AKM1202
	CN1601,CN1602,CN1604,CN1605 55P CONNECTOR	AKM1202
	K1301,K1302,K1308,K1311-K1314 TEST PIN	AKX9002
	K1316,K1321,K1324,K1326-K1331 TEST PIN	AKX9002

Mark	No.	Description	Part No.
	K1333,K1501,K1502,K1601,K1602	TEST PIN	AKX9002
	K1728,K1729	TEST PIN	AKX9002
	CN1503,CN1603	PH CONNECTOR	B8B-PH-SM3
	CN1301	8P PLUG	CKS3130
	CN1702	30P CONNECTOR	KF050HA30L

[D-D CONVERTER BLOCK]

SEMICONDUCTORS

	Q1902,Q1905,Q1907	2SC2712
	Q1903	DTC143EK
	Q1901,Q1904,Q1906	HN1C01FU
	D1903-D1906,D1911,D1912	1SS355
	D1908	HZU2.2B
	D1902,D1909	UDZ3.6B
	D1907	UDZS5.1B
	D1901	UDZS6.8B

CAPACITORS

	C1904,C1906,C1912	CEV220M16
	C1901-C1903,C1905,C1907-C1911	CKSRYF104Z16

RESISTORS

	R1935,R1936	RS1/2S680J
	Other Resistors	RS1/16S□□□J

OTHERS

	K1901-K1906	TEST PIN	AKX9002
	1901	DC-DC CONVERTER	AXY1054
	CN1901	PH CONNECTOR	B13B-PH-SM3

I/O ASSY

[I/O BLOCK]

SEMICONDUCTORS

	IC4003	PQ05DZ11
	IC4002	PQ09DZ11
	IC4004	PQ12DZ11
	IC4005,IC4006	PQ3DZ13
	IC4001	TA79L05F

CAPACITORS

	C4027	CEHAT100M50
	C4012,C4020,C4024	CEHAT101M10
	C4008	CEHAT101M16
	C4001,C4004,C4005,C4009,C4013	CEHAT470M16
	C4016,C4017	CEHAT470M16
	C4002,C4003,C4006,C4007	CKSRYF104Z16
	C4010,C4011,C4014,C4015	CKSRYF104Z16
	C4018,C4019,C4022,C4023	CKSRYF104Z16
	C4026	CKSRYF105Z10

RESISTORS

	R4001,R4003,R4004,R4007	RS1MMF1R0J
	R4002	RS1MMF8R2J

OTHERS

	CN4002	15P PLUG	KM200NA15

Mark	No.	Description	Part No.

[RGB I/O BLOCK]

SEMICONDUCTORS

	IC4110	24LCS21A
	IC4108	BA7657F
	IC4107,IC4111	LT1399CS
	IC4104	TA7630P
	IC4103,IC4105	TC4052BF
	IC4109	TC74VHCT541AFT
	IC4101,IC4102	UPC4570G2
	Q4114	2SC2412K
	Q4102	DTA143EK
	Q4103,Q4117	DTC143EK
	Q4104-Q4106,Q4108,Q4111,Q4112	HN1B04FU
	Q4101,Q4113	HN1C01FU
	Q4115,Q4116	UMY1N
	D4111	1SS184
	D4105-D4107,D4114-D4116	1SS226
	D4119,D4120	1SS226
	D4121	1SS352
	D4110	RD6.8MB
	D4108,D4109,D4112,D4113	UDZS5.6B
	D4122,D4123	UDZS5.6B

SWITCH

	S4101	ASH1029

CAPACITORS

	C4144,C4145,C4155,C4156	CCSRCH220J50
	C4109,C4117	CCSRCH221J50
	C4166	CEHAT100M50
	C4137,C4161,C4169	CEHAT101M10
	C4120,C4124,C4135,C4136	CEHAT470M16
	C4139,C4140,C4143,C4150	CEHAT470M16
	C4153,C4154,C4157,C4174-C4176	CEHAT470M16
	C4167	CEHAT4R7M50
	C4101,C4104,C4106,C4110,C4111	CKSQYB105K10
	C4114,C4118,C4127,C4165	CKSQYB105K10
	C4170,C4171	CKSQYB105K10
	C4129,C4130,C4133,C4134,C4142	CKSRYB103K50
	C4149,C4151,C4152,C4177-C4179	CKSRYB103K50
	C4108,C4116	CKSRYB222K50
	C4146	CKSRYB471K50
	C4125,C4126	CKSRYB472K50
	C4107,C4119,C4121-C4123,C4128	CKSRYF104Z16
	C4147,C4158-C4160,C4162-C4164	CKSRYF104Z16
	C4168,C4180-C4182	CKSRYF104Z16

RESISTORS

	R4188-R4190	RS1/16S1001F
	R4271-R4273	RS1/16S1101F
	R4185,R4186,R4213,R4214	RS1/16S2201F
	R4165,R4166,R4180,R4210-R4212	RS1/16S75R0F
	R4262,R4263	RS1/2S750J
	Other Resistors	RS1/16S□□□J

OTHERS

	CN4101,CN4102	STEREO MINI JACK	AKN1069
	CN4103,CN4104	D-SUB SOCKET	AKP1214
	CN4105	BNC SOCKET	AKX1055

Mark	No.	Description	Part No.

RGB ASSY

[MATRIX BLOCK]

SEMICONDUCTORS

	IC4402	CXA2101AQ
	IC4403	ML6426CS-1
	IC4404	NJM072BM-E
	Q4407-Q4409	2SA1037K
	Q4413	2SC2412K
	Q4412	HN1A01FU
	Q4404	HN1B04FU
	Q4410	HN1C01FU
	D4401	1SS226

CAPACITORS

	C4406,C4412,C4458	CEHAT100M50
	C4405	CEHAT101M16
	C4456	CEHAT470M16
	C4437,C4451-C4453	CKSQYB105K10
	C4407,C4409,C4410,C4428,C4429	CKSQYB474K16
	C4431,C4432,C4434-C4436,C4445	CKSQYB474K16
	C4448	CKSQYB474K16
	C4421-C4423,C4426	CKSRYB104K16
	C4408	CKSRYB222K50
	C4411,C4414-C4418,C4420,C4424	CKSRYF104Z16
	C4427,C4430,C4433,C4438-C4444	CKSRYF104Z16
	C4446,C4447,C4449,C4450,C4455	CKSRYF104Z16
	C4457	CKSRYF104Z16

RESISTORS

	R4422,R4425,R4426	RAB4C103J
	R4483	RS1/16S1003F
	R4476	RS1/16S1004F
	R4448	RS1/16S2202F
	R4437	RS1/16S2204F
	R4494	RS1/16S3901F
	R4482	RS1/16S4701F
	R4455	RS1/16S4702F
	R4489	RS1/16S5601F
	Other Resistors	RS1/16S□□□J

[AD/PLL/AMP BLOCK]

SEMICONDUCTORS

	IC4603	CXA3516R
	IC4605	NJM072BM-E
	IC4604	TC74HC4066AF
	IC4601	TC74LCX125FT
	IC4602	TC7WH04FU
	Q4601,Q4602	2SC2412K
	Q4608	2SK208
	Q4607	DTC124EK
	Q4604-Q4606	HN1B04FU
	Q4603	HN1C01FU
	D4601-D4605	1SS355

CAPACITORS

	C4623	CCSRCH101J50
	C4615,C4680	CCSRCH220J50
	C4626,C4669	CCSRCH221J50
	C4620	CCSRCH331J50
	C4604,C4607,C4614,C4638	CEHAT101M10
	C4651,C4652,C4656,C4668	CEHAT101M10
	C4622	CFTLA105J50
	C4662	CKSRYB102K50
	C4608,C4619,C4627,C4628	CKSRYB104K16
	C4634,C4635,C4639,C4640	CKSRYB104K16
	C4610,C4647	CKSRYB105K6R3
	C4675	CKSRYB184K10
	C4601,C4605,C4606,C4609	CKSRYF104Z16
	C4611-C4613,C4616-C4618	CKSRYF104Z16
	C4624,C4625,C4629-C4633	CKSRYF104Z16
	C4636,C4637,C4641-C4646	CKSRYF104Z16
	C4648-C4650,C4653-C4655	CKSRYF104Z16
	C4657-C4661,C4663,C4677-C4679	CKSRYF104Z16

RESISTORS

	R4612,R4623,R4625,R4629,R4632	RAB4C101J
	R4636,R4639,R4641,R4643,R4647	RAB4C101J
	R4653,R4657	RAB4C101J
	R4635	RN1/16SE3001D
	R4630	RS1/16S2201F
	R4676,R4715	RS1/16S2204F
	R4626	RS1/16S2701F
	R4631	RS1/16S3301F
	VR4701 (4.7kΩ)	ACP1091
	Other Resistors	RS1/16S□□□J

[SYNC CONTROL BLOCK]

SEMICONDUCTORS

	IC4802	M52346SP
	IC4801	NJM2234M
	IC4803	PDY077E
	Q4806	2SC2412K
	Q4808,Q4809	DTC124EK
	Q4803	HN1A01FU
	Q4807	HN1B04FU
	Q4802	HN1C01FU
	D4807,D4808	1SS184
	D4801,D4802	1SS226

FILTERS

	F4801,F4802 EMI FILTER	ATF1194

CAPACITORS

	C4863,C4864	CCSRCH151J50
	C4801,C4805	CCSRCH220J50
	C4821,C4833	CCSRCH221J50
	C4804	CCSRCH470J50
	C4807,C4810,C4823	CEHAT100M50
	C4812,C4844	CEHAT101M10
	C4803,C4806,C4815	CEHAT470M16
	C4817,C4822	CEHAT4R7M50
	C4816	CKSQYB105K10
	C4829	CKSRYB472K50
	C4802,C4808,C4811,C4813,C4814	CKSRYF104Z16
	C4819,C4820,C4830,C4831,C4836	CKSRYF104Z16
	C4839,C4842,C4843,C4850,C4861	CKSRYF104Z16
	C4860	CKSRYF105Z10

Mark	No.	Description	Part No.
RESISTORS			
	R4814,R4818,R4835,R4915		RAB4C101J
	R4913		RAB4C102J
	R4809		RAB4C152J
	R4825		RAB4C471J
	R4808,R4943		RAB4C472J
	R4864		RS1/16S1802F
	R4865		RS1/16S2702F
	R4868		RS1/16S4702F
	Other Resistors		RS1/16S□□□J
OTHERS			
	K4801,K4802,K4805,K4806	TEST PIN	AKX9002
	K4809,K4810	TEST PIN	AKX9002
	CN4801	8P PLUG	CKS3130
[IP BLOCK]			
SEMICONDUCTORS			
	IC5101,IC5103		MS82V16520-8GA
	IC5102		PE5066A
	IC5001		PE5067A
CAPACITORS			
	C5017,C5121		CCSRCH220J50
	C5006		CEHAT101M10
	C5015,C5016		CEHAT221M6R3
	C5001-C5005,C5007-C5013		CKSRYF104Z16
	C5101-C5120		CKSRYF104Z16
RESISTORS			
	All Resistors		RS1/16S□□□J
OTHERS			
	5002	HEATSINK FOR IC	ANH1574
	5001	HEAT SINK L FOR IC	ANH1576
[DIGITAL SELECT BLOCK]			
SEMICONDUCTORS			
	IC5201-IC5207		TC74LCX541FT
CAPACITORS			
	C5201-C5207		CKSRYF104Z16
RESISTORS			
	R5213		RAB4C103J
	R5201-R5212,R5215,R5217		RAB4C470J
	Other Resistors		RS1/16S□□□J
OTHERS			
	J5203	10P HOUSING WIRE	ADX2706
	J5204	11P HOUSING WIRE	ADX2781
	CN5201	120P PLUG	AKM1203

Mark	No.	Description	Part No.
[IC30 BLOCK]			
SEMICONDUCTORS			
	IC5302,IC5303		MS82V16520-8GA
	IC5301		PD6357B
CAPACITORS			
	C5301,C5308		CEHAT101M10
	C5302-C5307,C5309-C5322,C5324		CKSRYF104Z16
RESISTORS			
	All Resistors		RS1/16S□□□J
OTHERS			
	K5314-K5317	TEST PIN	AKX9002
	X5301	CRYSTAL RESONATOR (100.00MHz)	ASS1161
[MAIN UCOM BLOCK]			
SEMICONDUCTORS			
	IC5502		24LC64(I)SN
	IC5504,IC5509		74VHCT00AMTC
	IC5512		LM50CIM3
	IC5505		M30624FGAFP
	IC5511		M5223AFP
	IC5510		PST9246N
	IC5503		TC74VHC541FT
	IC5501		TC74VHCT541AFT
	IC5506,IC5507		TC7W126FU
	Q5501		2SJ461
	Q5502,Q5503		DTA143EK
	Q5504		HN1A01FU
CAPACITORS			
	C5512,C5513,C5521,C5534		CCSRCH220J50
	C5526,C5527		CCSRCH7R0D50
	C5545		CEHAT100M50
	C5528,C5533		CEHAT470M16
	C5507,C5508,C5511,C5518,C5522		CKSRYB102K50
	C5529-C5531,C5536,C5537		CKSRYB102K50
	C5535,C5538,C5539		CKSRYB221K50
	C5524		CKSRYB472K50
	C5525		CKSRYF103Z50
	C5502-C5505,C5509,C5514-C5517		CKSRYF104Z16
	C5519,C5520,C5523,C5532		CKSRYF104Z16
	C5542-C5544		CKSRYF105Z10
RESISTORS			
	R5503,R5509,R5510		RAB4C101J
	R5535		RAB4C103J
	R5504,R5526		RAB4C473J
	R5569		RS1/16S1001F
	R5571		RS1/16S1800F
	R5566		RS1/16S3001F
	R5563		RS1/16S5101F
	Other Resistors		RS1/16S□□□J
OTHERS			
	CN5506	30P PLUG	AKM1204
	K5501,K5502,K5508-K5510,K5512	TEST PIN	AKX9002
	K5515,K5516,K5518	TEST PIN	AKX9002
	X5501	CERAMIC RESONATOR (16MHZ)	ASS1159
	CN5501,CN5502	8P PLUG	CKS3130

Mark	No.	Description	Part No.
[WIDE UCOM BLOCK]			
SEMICONDUCTORS			
	IC5601		HD64F2328VF
	IC5604		NC7SZ08P5
	IC5603		PST9228N
	IC5605		TC7SH32FU
	IC5607,IC5608		TC7WH74FU
CAPACITORS			
	C5601		CCSRCH102J50
	C5615,C5616		CCSRCH7R0D50
	C5611		CKSRYB472K50
	C5612		CKSRYF103Z50
	C5604,C5606,C5608,C5610,C5613		CKSRYF104Z16
	C5617-C5619		CKSRYF104Z16
RESISTORS			
	R5603,R5604		RAB4C103J
	Other Resistors		RS1/16S□□□J
OTHERS			
	X5601	CERAMIC RESONATOR (25MHz)	ASS1160
[DIGITAL I/F BLOCK]			
SEMICONDUCTORS			
	IC5701		TC7WH123FU
	IC5702		TC7WH74FU
	D5701		1SS352
CAPACITORS			
	C5703		CCSRCH471J50
	C5701,C5702		CKSRYF104Z16
RESISTORS			
	R5701-R5707,R5709,R5712-R5719		RAB4C101J
	R5721		RAB4C101J
	R5730		RS1/16S1003F
	Other Resistors		RS1/16S□□□J
OTHERS			
	CN5701,CN5702	50P CONNECTOR	AKM1201

MX AUDIO ASSY

Mark	No.	Description	Part No.
[MX AUDIO BLOCK]			
SEMICONDUCTORS			
	IC8601		BA5417
	Q8602		2SA1037K
	Q8603,Q8605,Q8607		2SC2412K
	Q8606		DTC143EK
	Q8601		HN1B04FU
	Q8604		RN1901
COILS			
	L8602,L8603	AF CHOKE COIL	ATH-059
	L8601	CHIP CHOKE COIL	ATH9003
CAPACITORS			
	C8602,C8617		CEAT101M16
	C8606,C8607		CEAT101M25
	C8610		CEAT221M16
	C8605,C8613,C8614		CEAT470M35
	C8609,C8615,C8622		CEAT471M25
	C8611,C8618		CEAT4R7M50
	C8612,C8619		CKSQYF105Z16
	C8616,C8621		CKSRYB103K50
	C8625		CKSRYB222K50
	C8623,C8624		CKSRYB473K50
	C8601,C8608		CKSRYF103Z50
RESISTORS			
	R8633,R8634		RD1/2MMF100J
	R8625,R8632		RD1/2MMF152J
	R8624,R8631		RD1/4MUF100J
	Other Resistors		RS1/16S□□□J
[FAN DRIVE BLOCK]			
SEMICONDUCTORS			
	IC8703		74VHCT00AMTC
	IC8702		M5223AFP
	IC8701		PQ20WZ11
	Q8702		2SC2712
	Q8701		HN1A01FU
CAPACITORS			
	C8703		CEAT100M50
	C8704,C8707,C8711		CEAT101M16
	C8708,C8709,C8712		CEAT470M35
	C8706,C8710		CKSRYF104Z16
	C8705		CKSRYF105Z10
RESISTORS			
	R8715-R8717,R8720		RS1/16S1001F
	R8703		RS1/16S3001F
	R8707		RS1/16S5101F
	R8712		RS1/16S8200F
	R8710		RS3LMF2R7J
	Other Resistors		RS1/16S□□□J
OTHERS			
	CN8704,CN8705	CONNECTOR 3P	B3B-ZR-3.4
	CN8703	PH CONNECTOR	B6B-PH-SM3

CONTROL ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC8001		DS14C232CM
	IC8002		TC74HC00AF
	Q8002		2SC2712
	Q8001		HN1A01FU
	Q8003		RN1901
	D8009,D8010		1SS355
	D8001-D8008		UDZ15B
COIL			
	L8001		LCTA221J3225

Mark	No.	Description	Part No.
CAPACITORS			
	C8001,C8002,C8005,C8006		CEAT1R0M50
	C8003,C8010		CEAT470M16
	C8004,C8007,C8008		CKSRYB103K50
	C8009		CKSRYB472K50
RESISTORS			
	R8006		RAB4C102J
	Other Resistors		RS1/16S□□□J
OTHERS			
	CN8001,CN8002	MINI JACK	AKN1070
	CN8003	9P D-SUB SOCKET	AKP1213
	CN8004,CN8005	6P MINI DIN SOCKET	AKP1215
	CN8007	PH CONNECTOR	B6B-PH-SM3

SP OUT L ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC8151		LM50CIM3
	IC8152		M5223AFP
	Q8151		HN1A01FU
COILS			
	L8151,L8152	CHOKE COIL	ATH1073
CAPACITORS			
	C8163,C8164		CCSRCH101J50
	C8154		CCSRSL221J50
	C8162		CEAT470M16
	C8159		CKSRYB103K50
	C8151,C8153		CKSRYB332K50
	C8155		CKSRYB472K50
	C8157,C8161		CKSRYF104Z16
	C8158,C8160		CKSRYF105Z10
	C8152		CKSRYF473Z50
RESISTORS			
	R8153,R8154		RD1/2MMF100J
	R8164		RS1/16S1001F
	R8160		RS1/16S1800F
	R8165		RS1/16S3001F
	R8159		RS1/16S5101F
	Other Resistors		RS1/16S□□□J
OTHERS			
	CN8151	2P SPEAKER TERMINAL	AKE1041
	CN8152	PH CONNECTOR	B6B-PH-SM3

SP OUT R ASSY

Mark	No.	Description	Part No.
COILS			
	L8176,L8177	CHOKE COIL	ATH1073
CAPACITORS			
	C8182,C8183		CCSRCH101J50
	C8179		CCSRSL221J50
	C8176,C8178		CKSRYB332K50
	C8180		CKSRYB472K50
	C8177		CKSRYF473Z50
RESISTORS			
	R8178,R8179		RD1/2MMF100J
	Other Resistors		RS1/16S□□□J
OTHERS			
	CN8176	2P SPEAKER TERMINAL	AKE1041
	CN8177	PH CONNECTOR	B3B-PH-SM3

SIDE KEY ASSY

Mark	No.	Description	Part No.
SWITCHES			
	S8251-S8261		ASG1088
OTHERS			
	CN8251	8P FFC CONNECTOR	AKM1207

THERMAL SENSOR ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC8351		LM50CIM3
	IC8352		M5223AFP
CAPACITORS			
	C8356		CEV470M6R3
	C8354		CKSRYB103K50
	C8351,C8355		CKSRYF104Z16
	C8352,C8353		CKSRYF105Z10
RESISTORS			
	R8354,R8358		RS1/16S1001F
	Other Resistors		RS1/16S□□□J

MX LED ASSY

Mark	No.	Description	Part No.
SEMICONDUCTOR			
	D8501		AEL1170
OTHERS			
	CN8501	PH CONNECTOR	S3B-PH-SM3

Mark	No.	Description	Part No.

IR ASSY

SEMICONDUCTORS

	Q8551	2SC2712
	D8552	1SS226
	D8551	1SS355

CAPACITORS

	C8551	CEV470M6R3
	C8553	CKSQYB472K50
	C8552	CKSRYB103K50
	C8554	CKSRYF104Z16

RESISTORS

	All Resistors	RS1/16S□□□J

OTHERS

	8551	REMOTE RECEIVER UNIT	GP1UM26RK

KEY CONNECTOR ASSY

SEMICONDUCTORS

	IC8301	PD5719A
	Q8301	2SC2712
	D8304-D8310	1SS226
	D8301,D8303	1SS355
	D8302	RD3.0MB

CAPACITORS

	C8303	CEAT2R2M50
	C8304	CKSRYB103K50
	C8301,C8302,C8305	CKSRYB472K50

RESISTORS

	R8315	RAB4C182J
	Other Resistors	RS1/16S□□□J

OTHERS

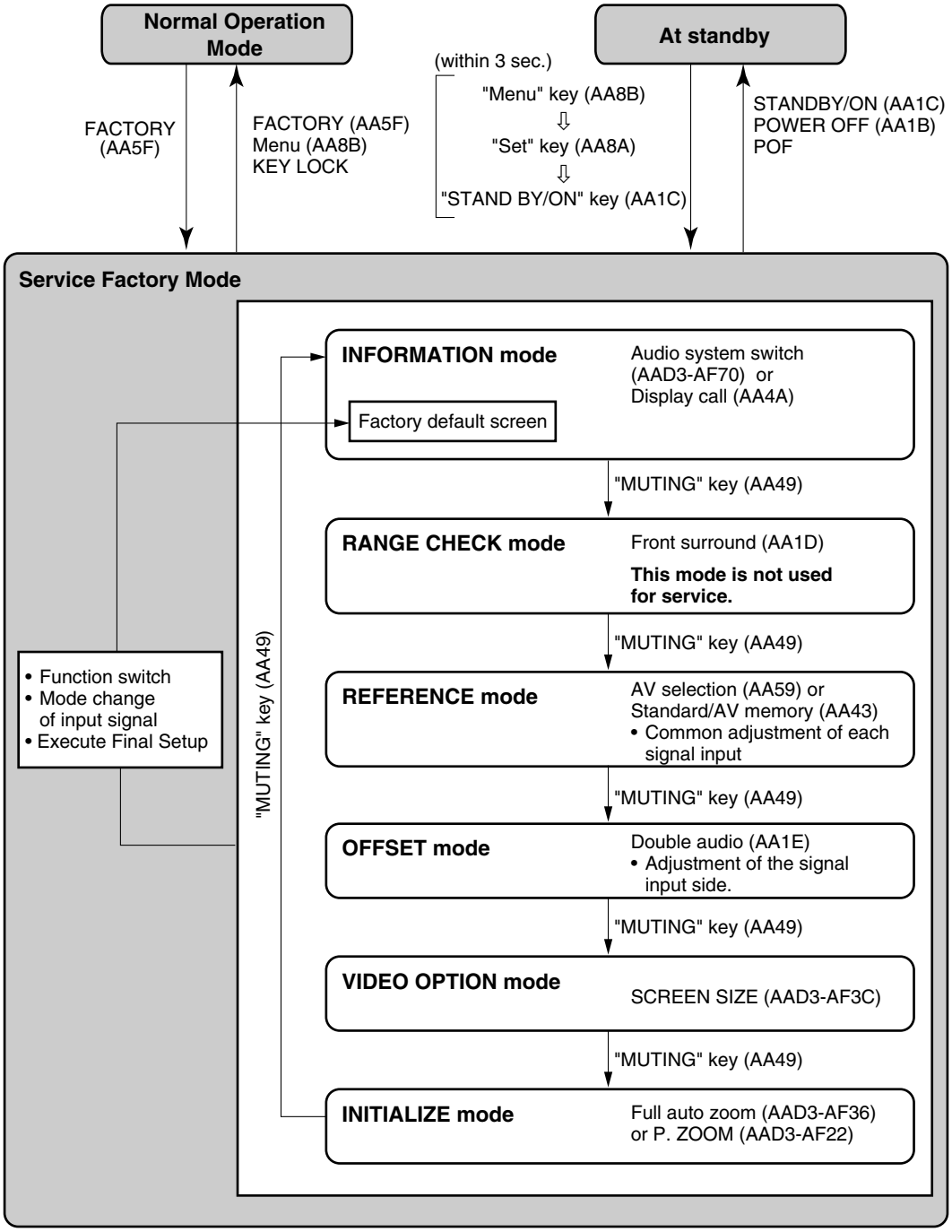
	CN8302	8P FFC CONNECTOR	AKM1207
	CN8301	PH CONNECTOR	B4B-PH-SM3
	X8301	CERALOCK (3.84MHz)	ASS1162

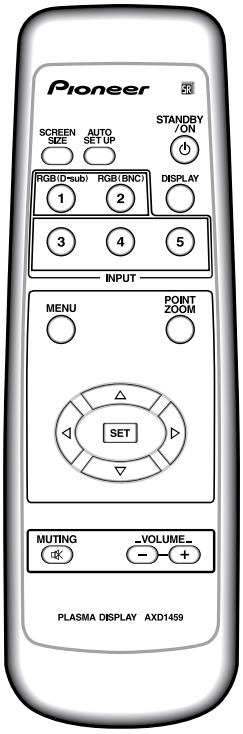
6. ADJUSTMENT

6.1 SERVICE FACTORY MODE

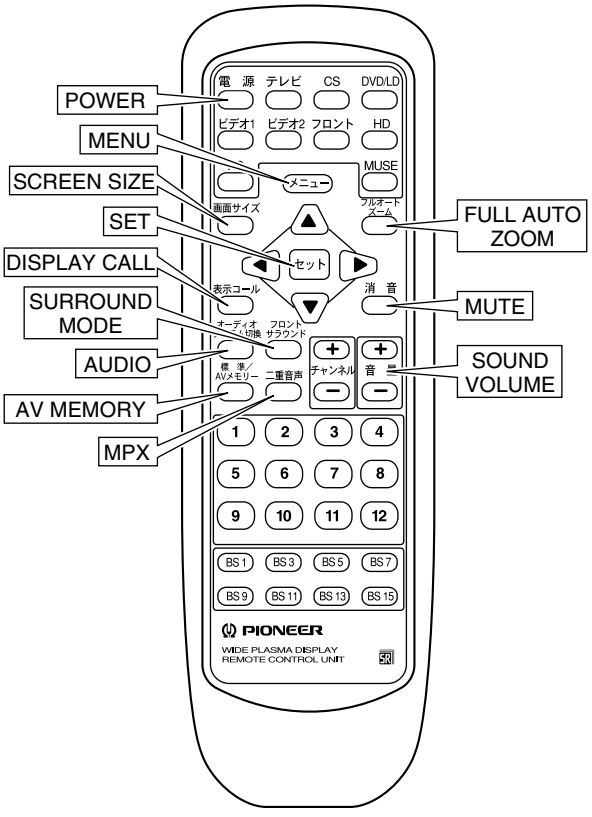
Perform the operations of Service Factory mode using the Remote Control Unit provided with the Plasma Display (AXD1459).

6.1.1 State Transition Diagram

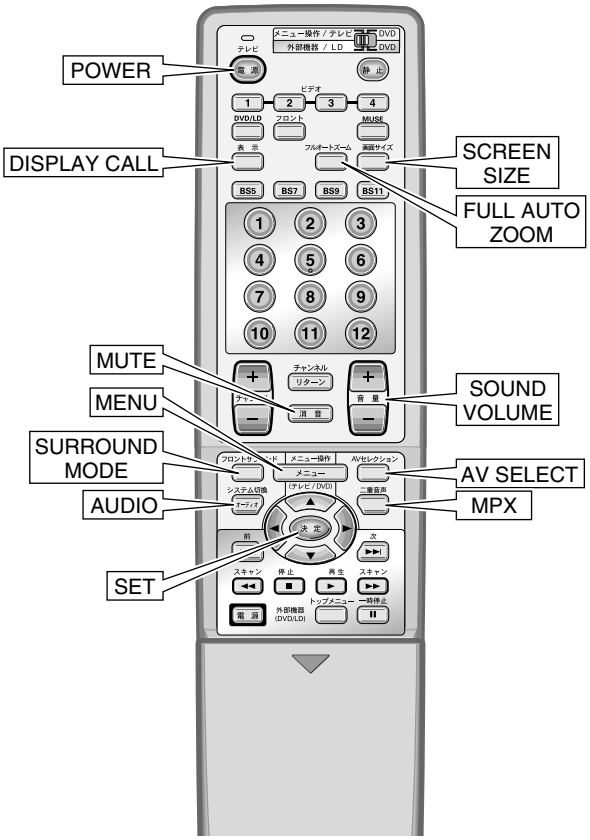




• AXD1459
(PDP-503CMX / PDP-433CMX)



• AXD1432
(PDP-501HD)



• AXD1673
(PDP-502HD)

Caution of Operation of the Remote Control Unit

- In the service factory mode, use the key which does not exist in a remote control unit (AXD1459) attached to this product as the direct selection key of item when selects each item. These keys can use with the attached remote control units (AXD1432 and AXD1673) in the PDP-501HD and PDP-502HD.
- When operate the service factory mode with the attached remote control unit in this product, selection is possible with the following key cyclically.
  Large item selection: MUTE key
  Selection except large item: UP (▲), DOWN (▼) keys

Operation When Entered the Service Factory Mode

① Setting value of menu mode

- Reset "PICTURE" item (center value).
  Notes : Adjustment value of "PICTURE" to reset is limited to the following face.
  At VIDEO: Current signal mode of the selected input function
  At PC: Correspond to the history of the signal mode input into past, "Table A to H ".
- Reset all "SCREEN" items (center value).
  Note: Adjustment value of "SCREEN" to reset is limited to the current signal mode of the selected input function.
  Supplement: If execute FINAL SET UP or PICTURE DEFAULT, minimize the adjustment value of menu mode here so that it becomes the center value.
- "SET UP" and "OPTION" of menu mode are maintained except items as follows.
  COLOR TEMP: It becomes "MIDDLE" setting
  AUTO POWER OFF/POWER MANAGEMENT: Setting is maintained, but do not work

② Adjustment value of the integrator mode

- Adjustment values of "PICTURE" and "WHITE BAL" select the adjustment values which are applicable to the current input function signal mode.
  Notes : Adjustment value of "PICTURE" and "WHITE BAL" to reset is limited to the following face.
  At VIDEO: Current signal mode of the selected input function
  At PC: Correspond to the history of the signal mode input into past, "Table A to H ".
- SCREEN setting value is maintained.
- "SET UP" and "OPTION" of integrator menu are maintained except items as follows.
  SIDE MASK LEVEL: Adjustment value is reset, and it becomes default value.
  FULL MASK which was set with the integrator mode: Release
  OFF TIMER: Release
- COLOR MODE (integrator menu) setting maintains setting in the integrator menu.

③ Others

- When input signal mode changed, change setting, and display default screen (INFORMATION-VERSION) of the service factory mode. Maintain the service factory mode.
  Note: At a point in time when the input signal mode changed, perform an operation of ① and ②.
- Switch it in selected FUNCTION when switched FUNCTION. Then display default screen (INFORMATION-VERSION) of the service factory mode, and maintain the service factory mode.
  Note: At the point that switched FUNCTION, perform an operation of ① and ②.
- Perform COLOR DETECT setting with "COLOR SYSTEM" of set menu mode.
- Only address 0100-01FF of module microcomputer / EEPROM copy/updates the data to the module microcomputer area of main microcomputer EEPROM.
- Various protection feature of the panel (Still picture detection, Block brightness detection and SCAN IC protection feature) turns OFF.
  Notes: When each protection feature turns OFF once and released the factory mode, maintain it. Protection feature turns ON by turning ON from POWER OFF. Therefore turn ON from POWER OFF by all means in order to operate protection feature when released the factory mode.

- In the no input, apply playback and non-correspondence PC signal input, accepts only the setting item that does not depend on a signal mode. (But refer to the item "MASK1 and MASK2" about MASK setting.)
  An item depending on the signal mode turns the display color to gray and it cannot change the setting.

6.1.2 Adjustment Items Table of Service Factory

SLOT

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
CD	YDL	Y-DELAY	YDL	REF/OFS-SLOT-1	0 to 15 [8]
	YOUTLEV	Y-OUT LEVEL	YOL	REF/OFS-SLOT-2	0 to 63 [32]
	TINT	CD TINT	CTI	REF/OFS-SLOT-3	0 to 63 [32]
	CrOFFSET	CDR OFFSET	CDR	REF/OFS-SLOT-4	0 to 15 [8]
	CbOFFSET	CDB OFFSET	CDB	REF/OFS-SLOT-5	0 to 15 [8]
EXP	R-Y_LEVEL	R-Y LEVEL	LRY	REF/OFS-SLOT-6	0 to 255 [128]
	B-Y_LEVEL	B-Y LEVEL	LBY	REF/OFS-SLOT-7	0 to 255 [128]

RGB1

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
MATRIX	PICTURE	MAT CONT	MCT	REF/OFS-RGB1-1	0 to 63 [32]
	BRIGHT	MAT BRIGHT	MBR	REF/OFS-RGB1-2	0 to 63 [32]
	COLOR	MAT COLOR	MCL	REF/OFS-RGB1-3	0 to 63 [32]
	HUE	MAT TINT	MTI	REF/OFS-RGB1-4	0 to 63 [32]
AD	MAINCONTRAST	AD MAIN CONT	MCA	REF/OFS-RGB1-5	0 to 255 [128]
	SUBRCONTRAST	AD R HIGH	GHA	REF/OFS-RGB1-6	0 to 255 [128]
	SUBGCONTRAST	AD G HIGH	BHA	REF/OFS-RGB1-7	0 to 255 [128]
	SUBBCONTRAST	AD B HIGH	RHA	REF/OFS-RGB1-8	0 to 255 [128]
	BRIGHTR	AD R LOW	GLA	REF/OFS-RGB1-9	0 to 255 [128]
	BRIGHTG	AD G LOW	BLA	REF/OFS-RGB1-10	0 to 255 [128]
	BRIGHTB	AD B LOW	RLA	REF/OFS-RGB1-11	0 to 255 [128]

RGB2

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
IC102 W/B	COLOR	COLOR	COL	REF/OFS-RGB2-1	0 to 255 [128]
	TINT	TINT	TNT	REF/OFS-RGB2-2	0 to 255 [128]
IC30 W/B	MCONTRAST	CONTRAST	CNT	REF/OFS-RGB2-3	0 to 255 [128]
	MBRIGHT	BRIGHT	BRT	REF/OFS-RGB2-4	0 to 255 [128]
	R HIGH	R. HIGH	RHI	REF/OFS-RGB2-5	0 to 255 [255]
	G HIGH	G. HIGH	GHI	REF/OFS-RGB2-6	0 to 255 [255]
	B HIGH	B. HIGH	BHI	REF/OFS-RGB2-7	0 to 255 [255]
	R LOW	R. LOW	RLW	REF/OFS-RGB2-8	0 to 255 [128]
	G LOW	G. LOW	GLW	REF/OFS-RGB2-9	0 to 255 [128]
	B LOW	B. LOW	BLW	REF/OFS-RGB2-10	0 to 255 [128]

DIGITAL

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
DIGITAL	PANEL R-HIGH	PANEL R-HIGH	PRH	REF/OFS-DIGITAL-1	0 to 255 [255]
	PANEL G-HIGH	PANEL G-HIGH	PGH	REF/OFS-DIGITAL-2	0 to 255 [255]
	PANEL B-HIGH	PANEL B-HIGH	PBH	REF/OFS-DIGITAL-3	0 to 255 [255]
	PANEL R-LOW	PANEL R-LOW	PRL	REF/OFS-DIGITAL-4	0 to 999 [512]
	PANEL G-LOW	PANEL G-LOW	PGL	REF/OFS-DIGITAL-5	0 to 999 [512]
	PANEL B-LOW	PANEL B-LOW	PBL	REF/OFS-DIGITAL-6	0 to 999 [512]
	ABL LEVEL	ABL LEVEL	ABL	REF/OFS-DIGITAL-7	0 to 255 [128]
	X-SUS-B	X-SUS-B	XSB	REF-DIGITAL-8	4 to 12
	X-SUS-G	X-SUS-G	XSG	REF-DIGITAL-9	4 to 12
	Y-SUS-B	Y-SUS-B	YSB	REF-DIGITAL-10	4 to 12
	Y-SUS-G	Y-SUS-G	YSG	REF-DIGITAL-11	4 to 12
	V-SUS	V-SUS	VSU	REF-DIGITAL-12	0 to 255
	V-OFFSET	V-OFFSET	VOF	REF-DIGITAL-13	0 to 255

SIDE MASK LEVEL (VIDEO OPTION)

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
IC30	R SIDE MASK LEV	R SIDE MASK LEV	RSL	VOP-M LEV-1	0 to 255
	G SIDE MASK LEV	G SIDE MASK LEV	GSL	VOP-M LEV-2	0 to 255
	B SIDE MASK LEV	B SIDE MASK LEV	BSL	VOP-M LEV-3	0 to 255

COLOR TEMP (VIDEO OPTION)

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
IC102	COLOR	COLOR		VOP-CT-3	0 to 255 [128]
	TINT	TINT		VOP-CT-4	0 to 255 [128]
IC30	MCONTRAST	CONTRAST		VOP-CT-1	0 to 255 [128]
	MBRIGHT	BRIGHT		VOP-CT-2	0 to 255 [128]
	R HIGH	R. HIGH		VOP-CT-5	0 to 255 [255]
	G HIGH	G. HIGH		VOP-CT-6	0 to 255 [255]
	B HIGH	B. HIGH		VOP-CT-7	0 to 255 [255]
	R LOW	R. LOW		VOP-CT-8	0 to 255 [128]
	G LOW	G. LOW		VOP-CT-9	0 to 255 [128]
	B LOW	B. LOW		VOP-CT-10	0 to 255 [128]

COLOR MODE2 (VIDEO OPTION)

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range (OFFSET Reference Value)
IC102	COLOR	COLOR		VOP-CM2-3	0 to 255 [128]
	TINT	TINT		VOP-CM2-4	0 to 255 [128]
IC30	MCONTRAST	CONTRAST		VOP-CM2-1	0 to 255 [128]
	MBRIGHT	BRIGHT		VOP-CM2-2	0 to 255 [128]
	R HIGH	R. HIGH		VOP-CM2-5	0 to 255 [255]
	G HIGH	G. HIGH		VOP-CM2-6	0 to 255 [255]
	B HIGH	B. HIGH		VOP-CM2-7	0 to 255 [255]
	R LOW	R. LOW		VOP-CM2-8	0 to 255 [128]
	G LOW	G. LOW		VOP-CM2-9	0 to 255 [128]
	B LOW	B. LOW		VOP-CM2-10	0 to 255 [128]

Calculation of Adjustment Value in the Service Factory Mode

- As for the adjustment value in the service factory mode, it becomes an actual adjustment value that subtracted OFFSET reference value (value in [ ] of the above table) from the value that added a REFERENCE adjustment value and an OFFSET adjustment value.
  Notes: It becomes the adjustment value the value that adjusted it with REFERENCE because there is not an OFFSET adjustment value as forR SIDE MASK LEV, G SIDE MASK LEV and B SIDE MASK LEV of item SIDE MASK LEVEL and X-SUS-B, X-SUS-G, Y-SUS-B, Y-SUS-G, V-SUS and V-OFFSET of item DIGITAL.
- As for COLOR MODE2 and COLOR TEMP, it becomes OFFSET value of each the value that subtracted OFFSET reference value (a value in [ ] of the above table) from a adjustment value of selected mode. It becomes a adjustment value of the last RGB 2 device (IC30 and IC102) the value that added this OFFSET value to each adjustment item of RGB 2.

Actual Calculation Example

- Each adjustment value of SLOT/ RGB 1/RGB2/DIGITAL
  (REFERENCE value)
  +
  { (OFFSET value) – [OFFSET reference value] } ... Calculation of a value to add as OFFSET

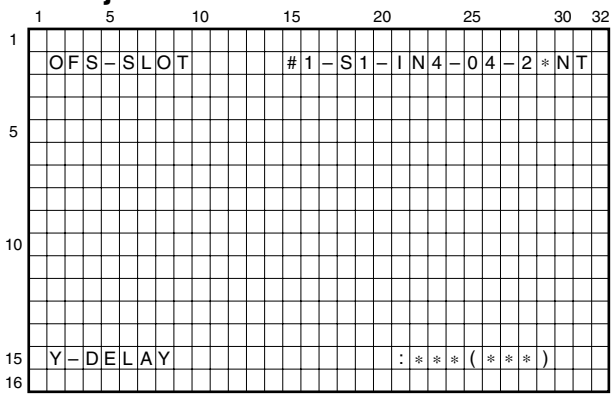
- COLOR MODE2 OFFSET value
  { (COLOR MODE2 adjustment value) - [OFFSET reference value] } ... Calculation of a value to add as OFFSET for COLOR MODE2
  Note: Add it only in COLOR MODE2 selection.

• COLOR TEMP OFFSET value
  {(COLOR TEMP adjustment value) - [OFFSET reference value] } ... Calculation of a value to add as OFFSET for COLOR TEMP
Note: Add it only in COLOR TEMP 1,2,4 and 5 selection.

Perform the addition in the normal operation, menu mode and COLOR TEMP adjustment mode of the service factory mode (in item VIDEO OPTION), and add OFFSET value of selected setting.
COLOR TEMP OFFSET does not add it in order to work by COLOR TEMP 3 setting in the integrator mode and in the service factory mode except COLOR TEMP adjustment mode.

6.1.3 Display Description of Service Factory Menu

1. In Adjustment Item



Display color : White
Halftone : Blue (second row/15th row for each 1 to 32 columns)
When there is not item which is applicable to the input signal mode, display the adjustment value with "————" (————)", and perform the item indication color to gray.

- Second row / 2th to 12th columns : Display the upper layer of selection item • • • At the Service factory mode
  Second row / 2th to 3th columns : Display the ID No. • • • At the RS-232C factory mode
  Second row / 5th to 12th columns : Display the upper layer of selection item • • • At the RS-232C factory mode
- Second row / 15th to 16th columns : Current color mode setting
- Second row / 18th to 19th columns : Current slot type

Slot Type or Model Type	At PDA-5002 is mounted with	PDP-503PRO and PRO-1000HD	Outside Product Slot	No SLOT
Display	S1	US	T1 to T8	NO

- Second row / 21th to 23th columns : Current function
- Second row / 25th to 28th columns : Current signal mode
- Second row / 28th columns : Current Screen size (Refer to the "classification of input signal" with regard to each numeric value.)

Current signal mode displayes the signal mode of any of mode 03, mode 31, mode E1, mode 61 or mode 71.

Setting	Signal Mode Display
VIDEO	03
VGA	31
WVGA	E1
XGA	61
WXGA	71

Current signal mode displayes the signal mode of any of mode 12 or mode 13.

HDTV Mode Setting (Integrator Menu)	Signal Mode Display
1080i	12
1035i	13

Display in the no signal and non-correspondence signal

Signal Mode Display	Signal Definition
FB	OUT OF RANGE (The signal that the measurement is impossible with the main microcomputer)
FC	OUT OF RANGE (In the video card when video signal does not input)
FD	OUT OF RANGE (In the non-correspondence signal at DVI input)
FE	OUT OF RANGE (When the measurement is possible with the main microcomputer, and non-correspondence signal that is not applicable to FC and FD)
FF	No signal

- Second row / 29th column : Current input form

Input Form	Component	Video–RGB	Composite	Y/C
Display	#	@	*	/

Non-display excepting above form (blank).

- Second row / 30th to 31th columns : Current color system

Color System	NTSC	PAL	SECAM	4.43NTSC	PAL-M	PAL-N	BLACK/WHITE
Display	NT	PL	SC	4N	PM	PN	BW

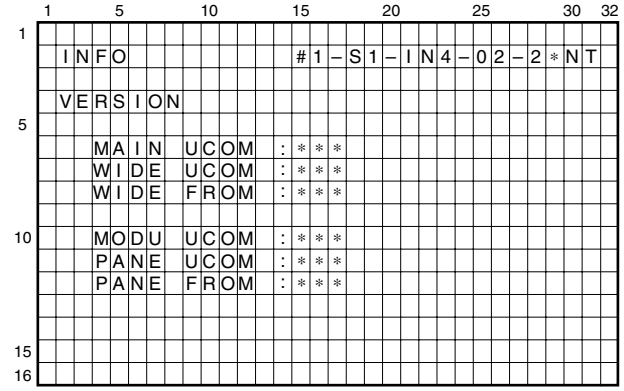
Non-display it (blank) when a case except COLOR SYSTEM mentioned above and COLOR SYSTEM setting is fixed.

- 15th row / 2th to 20th columns : Current item selection
- 15th row / 22th to 31th columns :

RANGE CHECK selection : Current selecting value

1. At REFERENCE selection : Adjustment value
2. At OFFSET selection : OFFSET value (adjustment value) * Adjustment value is REFERENCE value + OFFSET value.
3. At VIDEO OPTION selection : No display
   At INITIALIZE selection : The setting that is selected. (There is no display in the item which there is the lower layer.)

2. INFORMATION



●Basic Operation

• Display the state of each item

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	VERSION	Display the each information	Main, Wide, module and panel microcomputer : Ver Wide flash (OSD) / Panel flash (Sequence) : Ver	×
AA02	2	PD INFO		Past eight times / Place (1st, 2nd) / Time Stamp	×
AA03	3	NG INFO		AUDIO/FAN/MODULE/PANEL/WIDE/ MAIN IIC/MODULE IIC/DEW	×
AA04	4	TEMPERATURE		1/2/3/FAN output	×
AA05	5	MEMO		Display MEMO	×
AA06	6				
AA07	7				
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫				
AA95	≪				
AA8A	SET				
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	RANGE CHECK		

● Operating specification

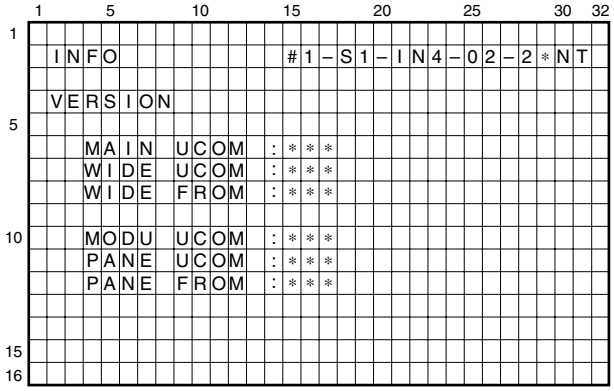
• Start from VERSION (Key1) when shifted to this setting screen.

• When each key was pressed, follow the required operation.

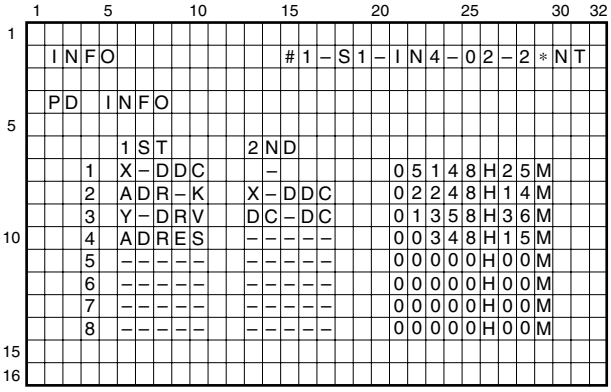
Note : Perform VERSION display as the default screen of the service factory mode.

3. OSD Display in INFORMATION

① VERSION



② PD INFO.

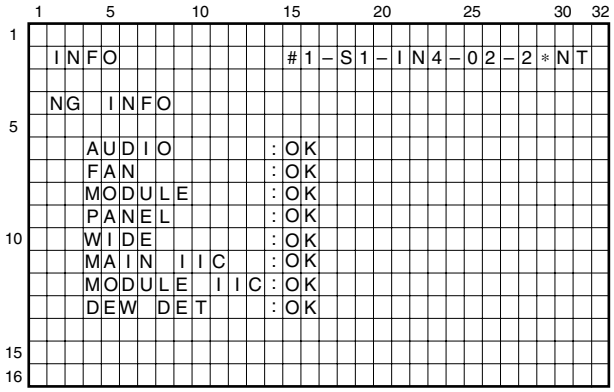


Display the power down point (1st or 1st, 2nd) and an hour meter of the time.
Perform display to maximum eight times, and if display became more than eight times, perform clear in order from the old information, and update it to the latest information.

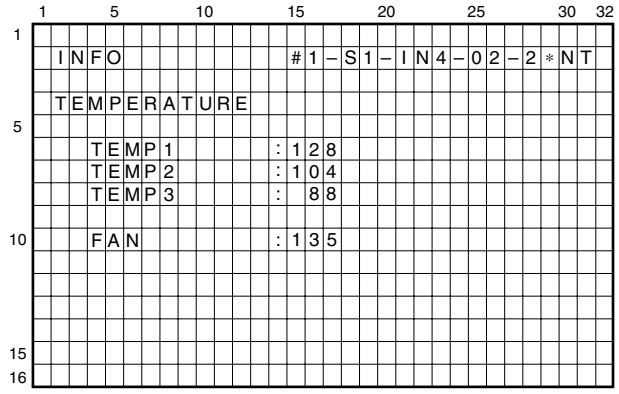
Display details at PD INFORMATION

Display	PD Point	Display	PD Point
X-DRV	X-DRIVE	ADRES	ADDRESS junction
X-DDC	X-DC/DC CONVERTER	ADR-K	ADDRESS resonance
Y-DRV	Y-DRIVE	POWER	Power supply
Y-DDC	Y-DC/DC CONVERTER	DC-DC	DC/DC CONVERTER (DIGITAL)

③ NG INFO.



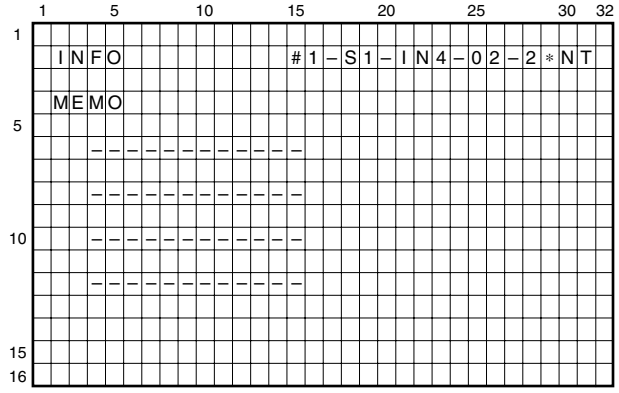
④ TEMPERATURE



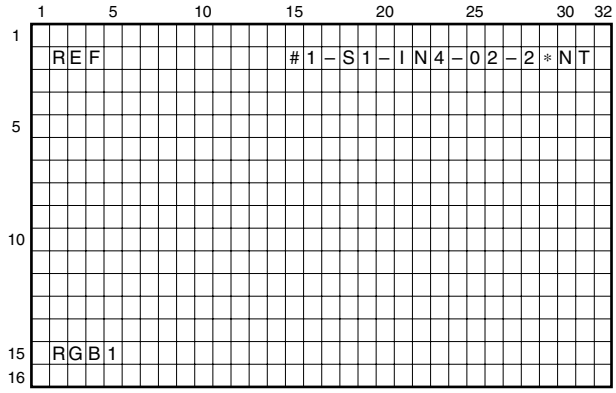
- Each display is the value of A/D input or D/A output of the microcomputer (0 to 255).
- Temperature sensor 1, 2 and 3
- FAN

Note: Refer to "Shut down diagnosis" in the "7.1.2 SHUTDOWN/POWER DOWN DIAGNOSIS BY LED DISPLAY" to calculate real sensor temperature from each indicated value.

⑤ MEMO



4. REFERENCE



Display color : White
Halftone : Blue (Second row / 15th row for each 1th to 32th columns)

●Basic Operation

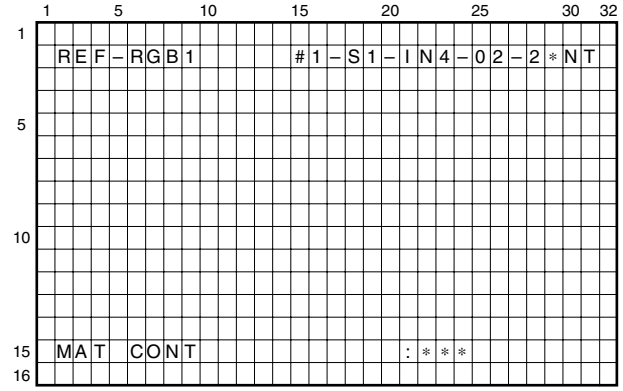
• Select the adjustment table.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	RGB1	Select the adjustment table		○
AA02	2	RGB2			○
AA03	3	DIGITAL			○
AA04	4	SLOT			○
AA05	5				
AA06	6				
AA07	7				
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select the upper item			
AA97	▼	Select the lower item			
AA94	≫				
AA95	≪				
AA8A	SET	Select the item and shift to lower layer			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment /setting screen	OFFSET		

●Operating specification

• Start from RGB 1 (Key 1) when shifted to this setting screen.
  However, the movement original item to be selected when shifted from the lower layer.
• When each key was pressed, follow the required operation.
• In INPUT5 (DVI) selection, impossible "RGB1" and "SLOT" selections (do not perform the display skip).
• When SLOT is not inserted and the external SLOT is inserted, selection of "SLOT" is impossible (do not perform the display skip).
• When selection of the item is impossible, turn the OSD display color into gray.

① REFERENCE — RGB1



Display color : White
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

•Basic Operation

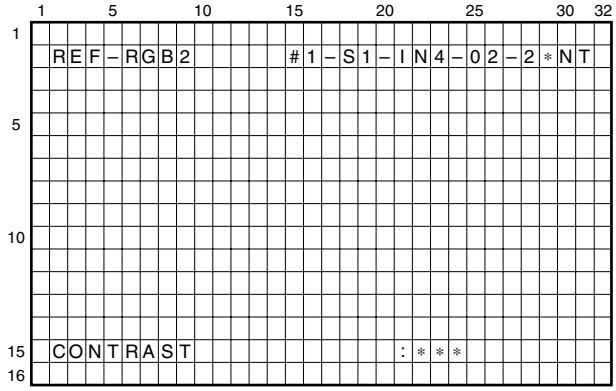
Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remark	Lower Layer
AA01	1	MAT CONT	Call the adjustment value and display it.		×
AA02	2	MAT BRIGHT			×
AA03	3	MAT COLOR			×
AA04	4	MAT TINT			×
AA05	5	AD MAIN CONT			×
AA06	6	AD R HIGH			×
AA07	7	AD G HIGH			×
AA08	8	AD B HIGH			×
AA09	9	AD R LOW			×
AA00	10	AD G LOW			×
AA46	11	AD B LOW			×
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫	Adjustment value of the parameter selecting goes up.			
AA95	≪	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	OFFSET		

•Operating specification

- Start from MAT CONT (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "–––––", and turn the item display color into gray.

② REFERENCE — RGB2



Display color : White
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

• Basic Operation

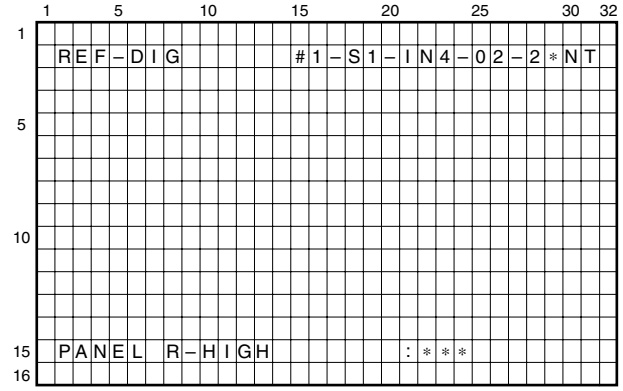
Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	CONTRAST	Call the adjustment value and display it.		×
AA02	2	BRIGHT			×
AA03	3	COLOR			×
AA04	4	TINT			×
AA05	5	R HIGH			×
AA06	6	G HIGH			×
AA07	7	B HIGH			×
AA08	8	R LOW			×
AA09	9	G LOW			×
AA00	10	B LOW			×
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫	Adjustment value of the parameter selecting goes up.			
AA95	≪	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	OFFSET		

• Operating specification

- Start from CONTRAST (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "————", and turn the item display color into gray.

③ REFERENCE — DIGITAL



Display color : White
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

•Basic Operation

Perform the adjustment of each parameter.

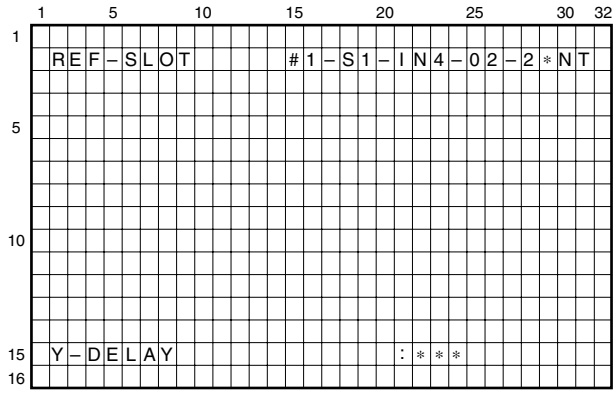
Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	PANEL R–HIGH	Call the adjustment value and display it.		×
AA02	2	PANEL G–HIGH			×
AA03	3	PANEL B–HIGH			×
AA04	4	PANEL R–LOW			×
AA05	5	PANEL G–LOW			×
AA06	6	PANEL B–LOW			×
AA07	7	ABL LEVEL			×
AA08	8	X–SUS–B			×
AA09	9	X–SUS–G			×
AA00	10	Y–SUS–B			×
AA46	11	Y–SUS–G			×
AA47	12	V–SUS			×
AA4D	BS1	V–OFFSET			×
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫	Adjustment value of the parameter selecting goes up.			
AA95	≪	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	OFFSET		

•Operating specification

- Start from PANEL R-HIGH (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "–––––", and turn the item display color into gray.

④ REFERENCE — SLOT (At Connected SLOT ST1)

• This mode is effective for SLOT ST1 only in connection



Display color : White
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

• Basic Operation

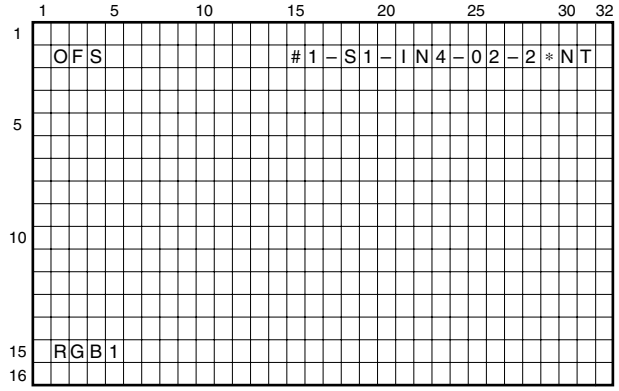
Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	Y–DELAY	Call the adjustment value and display it.		×
AA02	2	Y–OUT LEVEL			×
AA03	3	CD TINT			×
AA04	4	CDR OFFSET			×
AA05	5	CDB OFFSET			×
AA06	6	R–Y LEVEL			×
AA07	7	B–Y LEVEL			×
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫	Adjustment value of the parameter selecting goes up.			
AA95	≪	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	OFFSET		

• Operating specification

- Start from Y-DELAY (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "————", and turn the item display color into gray.

5. OFFSET



Display color : White
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

●Basic Operation

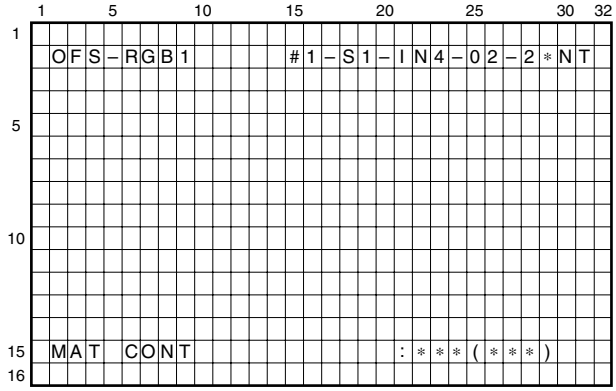
Select the adjustment table

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	RGB1	Select the adjustment table		○
AA02	2	RGB2			○
AA03	3	DIGITAL			○
AA04	4	SLOT			○
AA05	5				
AA06	6				
AA07	7				
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select the upper item			
AA97	▼	Select the lower item			
AA94	≫				
AA95	≪				
AA8A	SET	Select the item and shift to lower layer			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	VIDEO OPTION		

●Operating specification

- Start from RGB 1 (Key 1) when shifted to this setting screen. However, the movement original item to be selected when shifted from the lower layer.
- When each key was pressed, follow the required operation.
- In INPUT5 (DVI) selection, impossible "RGB1" and "SLOT" selections (do not perform the display skip).
- When SLOT is not inserted and the external SLOT is inserted, selection of "SLOT" is impossible (do not perform the display skip).
- When selection of the item is impossible, turn the OSD display color into gray.
- Selection of each item is impossible at no input signal.

① OFFSET — RGB1



Display color : White
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

●Basic Operation

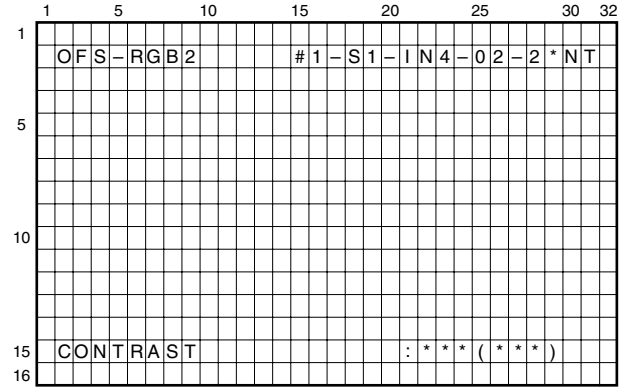
Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	MAT CONT	Call the adjustment value and display it.		×
AA02	2	MAT BRIGHT			×
AA03	3	MAT COLOR			×
AA04	4	MAT TINT			×
AA05	5	AD MAIN CONT			×
AA06	6	AD R HIGH			×
AA07	7	AD G HIGH			×
AA08	8	AD B HIGH			×
AA09	9	AD R LOW			×
AA00	10	AD G LOW			×
AA46	11	AD B LOW			×
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫	Adjustment value of the parameter selecting goes up.			
AA95	≪	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	VIDEO OPTION		

●Operating specification

- Start from MAT CONT (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "––––– (–––––)", and turn the item display color into gray.

② OFFSET — RGB2



Display color : White
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

●Basic Operation

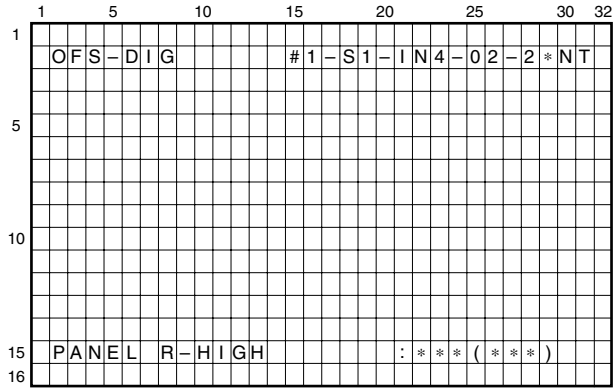
Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	CONTRAST	Call the adjustment value and display it.		×
AA02	2	BRIGHT			×
AA03	3	COLOR			×
AA04	4	TINT			×
AA05	5	R HIGH			×
AA06	6	G HIGH			×
AA07	7	B HIGH			×
AA08	8	R LOW			×
AA09	9	G LOW			×
AA00	10	B LOW			×
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫	Adjustment value of the parameter selecting goes up.			
AA95	≪	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	VIDEO OPTION		

●Operating specification

- Start from CONTRAST (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "––––– (–––––)", and turn the item display color into gray.

③ OFFSET — DIGITAL



Display color : White
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

●Basic Operation

Perform the adjustment of each parameter.

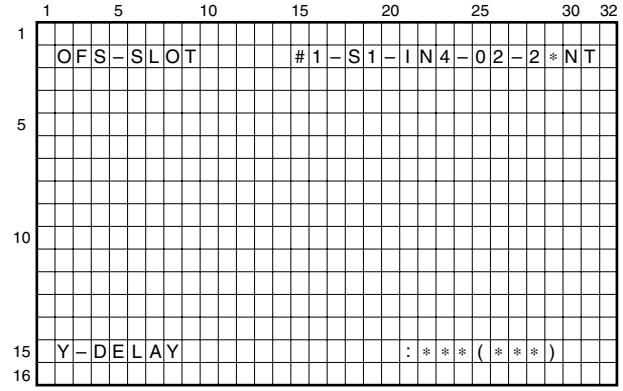
Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	PANEL R–HIGH	Call the adjustment value and display it.		×
AA02	2	PANEL G–HIGH			×
AA03	3	PANEL B–HIGH			×
AA04	4	PANEL R–LOW			×
AA05	5	PANEL G–LOW			×
AA06	6	PANEL B–LOW			×
AA07	7	ABL LEVEL			×
AA08	8	X–SUS–B	–	Selection is possible, and setting is impossible	×
AA09	9	X–SUS–G			×
AA00	10	Y–SUS–B			×
AA46	11	Y–SUS–G			×
AA47	12	V–SUS			×
AA4D	BS1	V–OFFSET			×
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫	Adjustment value of the parameter selecting goes up.			
AA95	≪	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	VIDEO OPTION		

●Operating specification

- Start from PANEL R–HIGH (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "––––– (–––––)", and turn the item display color into gray.
- Because there is not the item which is applicable to an OFFSET item as for X–SUS–B, X–SUS–G, Y-SUS-B, Y–SUS–G, V–SUS and V–OFFSET, selection is impossible. Always turn the OSD display color into gray, and display the adjustment value to "––––– (–––––)".

④ OFFSET — SLOT (At Connected SLOT ST1)

• This mode is effective for SLOT ST1 only in connection



Display color : White
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

•Basic Operation

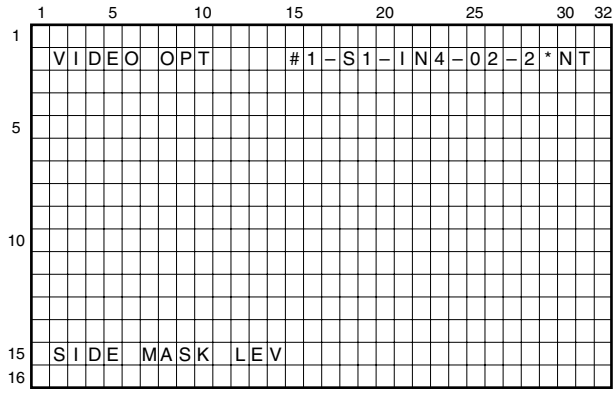
Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	Y–DELAY	Call the adjustment value and display it.		×
AA02	2	Y–OUT LEVEL			×
AA03	3	CD TINT			×
AA04	4	CDR OFFSET			×
AA05	5	CDB OFFSET			×
AA06	6	R–Y LEVEL			×
AA07	7	B–Y LEVEL			×
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫	Adjustment value of the parameter selecting goes up.			
AA95	≪	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	VIDEO OPTION		

•Operating specification

- Start from Y-DELAY (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- When there is not the item which is applicable to an input signal mode, display the adjustment value to "––––– (–––––)", and turn the item display color into gray.

6. VIDEO OPTION



Display color : White
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	SIDE MASK LEV	Select the adjustment item	Shift to adjustment screen of SIDE MASK LEVEL at SET (AA8A).	○
AA02	2	C MODE2		Shift to adjustment screen of COLOR MODE2 at SET (AA8A).	○
AA03	3	C TEMP LOW		Shift to adjustment screen of COLOR TEMP LOW at SET (AA8A).	○
AA04	4	C TEMP MID LOW		Shift to adjustment screen of COLOR TEMP MID LOW at SET (AA8A).	○
AA05	5	C TEMP MID HIGH		Shift to adjustment screen of COLOR TEMP MID HIGH at SET (AA8A).	○
AA06	6	C TEMP HIGH		Shift to adjustment screen of COLOR TEMP HIGH at +SET (AA8A).	○
AA07	7				
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫				
AA95	≪				
AA8A	SET	Select the item and shift to adjustment screen.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	INITIALIZE		

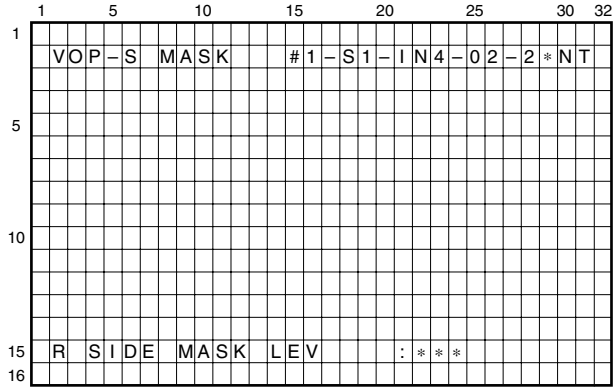
●Operating specification

- Start from SIDE MASK LEVEL (Key 1) when shifted to this setting screen.
  However, the movement original item to be selected when shifted from the lower layer.
- When each key was pressed, follow the required operation.

- When entered the service factory mode, COLOR MODE works by integrator setting.
  However in the COLOR MODE2 adjustment, Work with COLOR MODE2 without relation in COLOR MODE setting of the integrator menu.

- COLOR TEMP Setting in the COLOR TEMP Adjustment
  When entered the service factory mode without a relation in user setting, COLOR TEMP becomes "MIDDLE".
  In the COLOR TEMP adjustment, switch the operation to setting of selected COLOR TEMP.

① SIDE MASK LEV. Adjustment



Display color : White
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

•Basic Operation

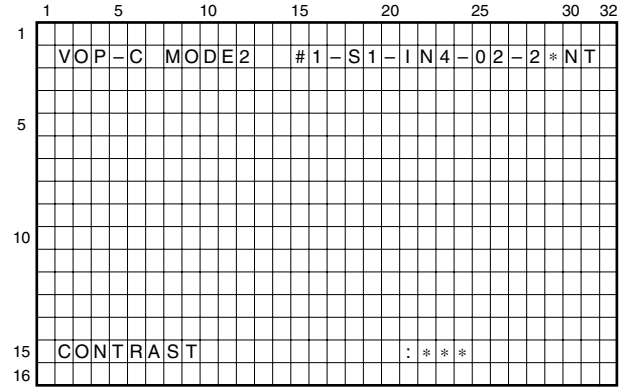
Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	R SIDE MASK LEV	Call the adjustment value and display it.		×
AA02	2	G SIDE MASK LEV			×
AA03	3	B SIDE MASK LEV			×
AA04	4				
AA05	5				
AA06	6				
AA07	7				
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫	Adjustment value of the parameter selecting goes up.			
AA95	≪	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	INITIALIZE		

•Operating specification

- Start from R SIDE MASK LEVEL (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.

② COLOR MODE2 Adjustment



COLOR MODE indication of second row/31th columns displays the default.
(It is not controlled with the COLOR MODE in adjustment.)

Display color : White
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

●Basic Operation

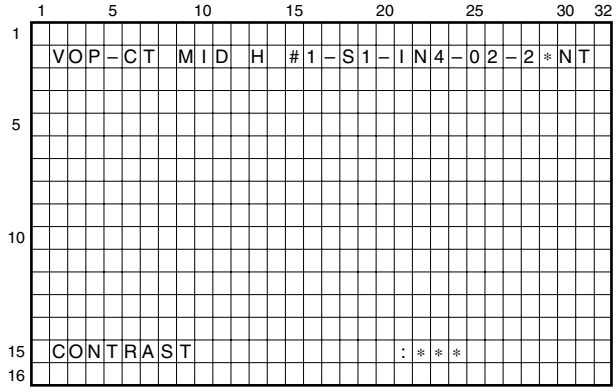
Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	CONTRAST	Call the adjustment value and display it.		×
AA02	2	BRIGHT			×
AA03	3	COLOR			×
AA04	4	TINT			×
AA05	5	R HIGH			×
AA06	6	G HIGH			×
AA07	7	B HIGH			×
AA08	8	R LOW			×
AA09	9	G LOW			
AA00	10	B LOW			
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫	Adjustment value of the parameter selecting goes up.			
AA95	≪	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	INITIALIZE		

●Operating specification

- Start from CONTRAST (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- It becomes COLOR MODE2 during COLOR MODE adjustment. However, do not perform the last memory of setting. (Perform last memory of the adjustment value.)

③ COLOR TEMP Adjustment



Display color : White
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

•Basic Operation

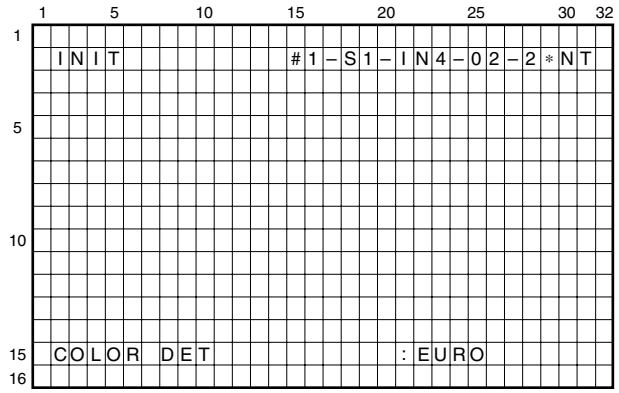
Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	CONTRAST	Call the adjustment value and display it.		×
AA02	2	BRIGHT			×
AA03	3	COLOR			×
AA04	4	TINT			×
AA05	5	R HIGH			×
AA06	6	G HIGH			×
AA07	7	B HIGH			×
AA08	8	R LOW			×
AA09	9	G LOW			×
AA00	10	B LOW			×
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫	Adjustment value of the parameter selecting goes up.			
AA95	≪	Adjustment value of the parameter selecting goes down.			
AA8A	SET	Store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	INITIALIZE		

•Operating specification

- Start from CONTRAST (key 1) when shifted to this setting screen.
- When a key was pressed, follow the required operation after performing the last memory of current adjustment value.
- Works by the selected COLOR TEMP setting during COLOR TEMP adjustment. However, do not perform the last memory of setting and maintain the "M IDDLE". (Perform last memory of the adjustment value.)

7. INITIALIZE



Display color : White
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

●Basic Operation

• Perform the modification and confirmation of various setting.

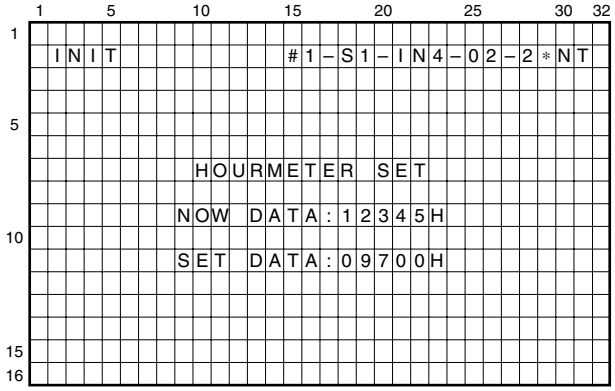
Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	COLOR DET	...→EURO→SA→ALL→...		×
AA02	2	EEP CHECK	EEPROM writing check		×
AA03	3	ACL SW	ON ↔ OFF		×
AA04	4	INTEGRATOR MODE	...→LOCK→UNLOCK→...		×
AA05	5	P&P WRITE ENA	For Plug & Play EEPROM writing		×
AA06	6	HOURMETER SET	Set the current hourmeter	Shift to setting screen at SET (AA8A)	○
AA07	7	PULSEMETER SET	Set the pulse hourmeter	Shift to setting screen at SET (AA8A)	○
AA08	8	FINAL SET UP		Execute at SET (AA8A)	×
AA09	9	VIDEO STANDARD	...→0→1→2→3→4→5→6→7→8→9→A...		×
AA00	10	PC STANDARD	...→0→1→2→3→4→5→6→7→8→9→A...		×
AA46	11	VIDEO MODE1	...→0→1→2→3→4→5→6→7→8→9→A...		×
AA47	12	PC MODE1	...→0→1→2→3→4→5→6→7→8→9→A...		×
AA4D	BS1	EEP DATA READ		Shift to setting screen at SET (AA8A)	○
AA4E	BS3	MASK1		Shift to setting screen at SET (AA8A)	○
AA4F	BS5	MASK2		Shift to setting screen at SET (AA8A)	○
AA50	BS7	MEMO		Shift to writing screen at SET (AA8A)	○
AA51	BS9	SERVICE PARTS		Execute at SET (AA8A)	×
AA52	BS11	PICTURE DEFAULT		Execute at SET (AA8A)	×
AA53	BS13				
AA54	BS15				
AA96	▲	Select upper item			
AA97	▼	Select lower item			
AA94	≫	Select the function			
AA95	≪	Select the function			
AA8A	SET	Select the item and shift to lower layer, or store the adjustment value and shift to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	INFORMATION		

●Operating specification

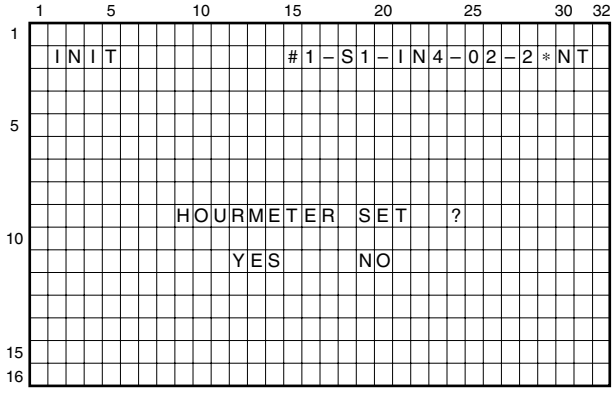
- Start from COLOR DET (Key 1) when shifted to this setting screen.
  However, the movement original item to be selected when shifted from the lower layer.
- When each key was pressed, follow the required operation.
- Perform the last memory of COLOR DET., ACL SW, INTE. MODE, MEMO, VIDEO STANDARD, PC STANDARD, VIDEO MODE1, PC MODE1, HOURMETER SET, PULSEMETER SET, FINAL SET UP, MASK1, MASK2 and PICTURE DEFAULT.

●Function description

1. COLOR DET. : Set the color detection system.
   → EURO → SA → ALL →
2. EEP CHECK: Check the EEPROM writing
   Display lower two places with the hexadecimal number of the result that added data to subaddress 1760-177C (PDC XGA/SHARP data) of EEPROM.
3. ACL SW: Set the ACL.
4. INTEGRATOR MODE: Set the integrator protection.
5. P&P WRITE ENA: Set the writing permission of the EEPROM for Plug & Play.
6. HOURMETER SET: Display and set the hourmeter.

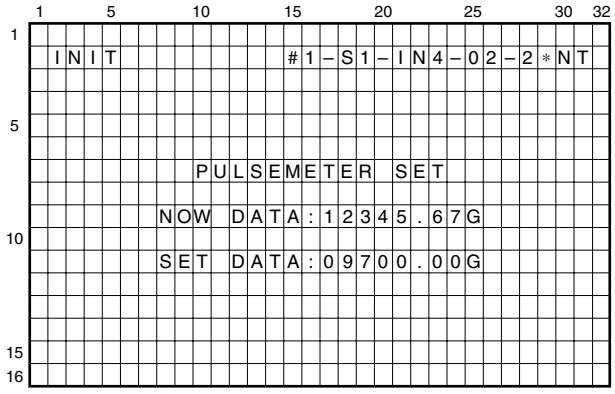


Can change three places of upper rank of SETDATA.
▲▼ : Select numeric value.
≪≫ : Can select three places of upper rank.
SET : Shift to the setting modification and confirmation screen.

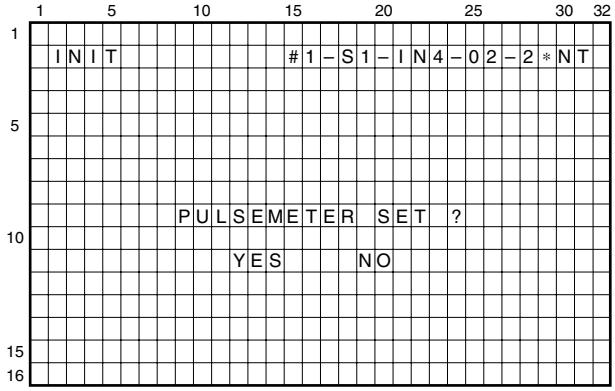


≪≫ : YES/NO selection
SET : Store the SET DATA at YES selection and shift to INIT screen.
Hold the NOW DATA at NO selection and shift to INIT screen.

7. PULSEMETER SET: Display and set the pulse meter.



Can change three places of upper rank of SETDATA.
▲▼ : Select numeric value.
≪≫ : Can select three places of upper rank.
SET : Shift to the setting modification and confirmation screen.

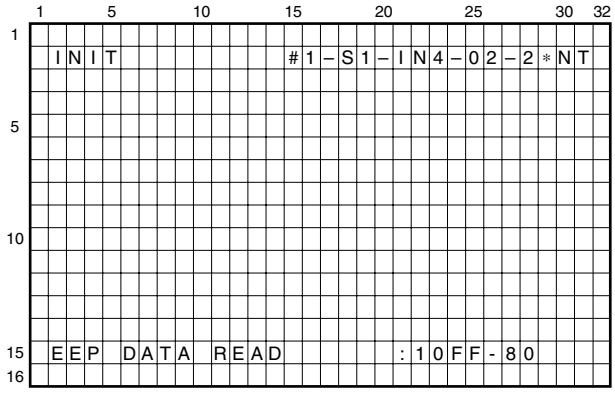


≪≫ : YES/NO selection
SET : Store the SET DATA at YES selection and shift to INIT screen.
Hold the NOW DATA at NO selection and shift to INIT screen.

8. FINAL SET UP: Setting to the factory shipping state.
   (Refer to the Final Setup Details.)
9. VIDEO STANDARD: Set the peak occurrences of STANDARD (USER MENU / POWER CONTROL) in the video system signal.
   (Set the following table 1.) Note: Please do not perform the change of setting in the service.
10. PC STANDARD: Set the peak occurrences of STANDARD (USER MENU / POWER CONTROL) in the PC system signal.
    (Set the following table 2.) Note: Please do not perform the change of setting in the service.
11. VIDEO MODE1: Set the peak occurrences of MODE1 (USER MENU / POWER CONTROL) in the video system signal.
    (Set the following table 3.) Note: Please do not perform the change of setting in the service.
12. PC MODE1: Set the peak occurrences of MODE1 (USER MENU / POWER CONTROL) in the PC system signal.
    (Set the following table 4.) Note: Please do not perform the change of setting in the service.

		Current Input Signal	
		VIDEO	**PC**
POWER CONTROL setting	**STANDARD mode**	Table1	Table2
	MODE1	Table3	Table4
	MODE2	PL6 (fixed)	

13. EEP DATA READ: Display the each address data of EEPROM.



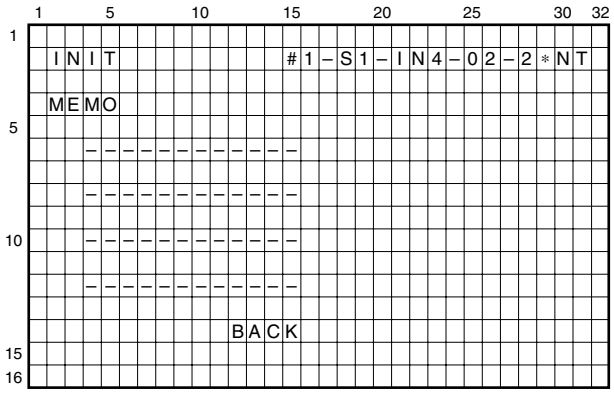
≪≫ : Select the address (four places) place.
▲▼ : Select numeric value.
SET : Shift to upper layer.
Update display data (hex) every address modification.

Display color : White (Selected address is yellow)
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

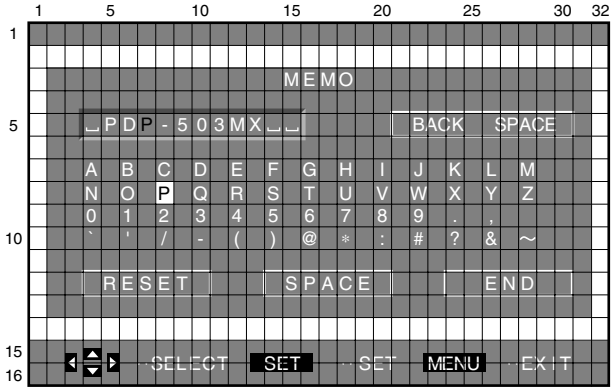
14. MASK1: Select the full mask.
    Note: Mask 1/2 are commonness and perform one item last memory.
15. MASK2: Select the mask pattern.
    Note: Mask 1/2 are commonness and perform one item last memory.

Caution: (item 14, 15 commonness)
- When key operation is done and performs OSD display, turns OFF FULL MASK for two seconds and display OSD. (common to in all modes)
- In FULL MASK selection (in MASK selection menu), Select the mask and turn off OSD two seconds later of no operation, and MASK screen displays.
- Perform MASK determination (press "SET"), and FULL MASK screen display starts.
- Release of the mask is possible only with "M00" with the RS-232C factory adjustment mode or "MASK OFF" of the service factory menu. (Release is impossible with "FULL MASK OFF" of the integrator menu and "FMN" of the RS-232C command.)

16. MEMO: Display and edit the memo data.



<MEMO/SELECT>
- Select MEMO to edit with ▲▼ keys.
- Shift to the <MEMO/EDIT> screen with the SET key.
- When selects BACK and presses the SET key, shift to the upper layer.



<MEMO/EDIT>
- Editing technique refers to the step of INPUT label of the user menu.
- Default is "- - - - - - - - -" display.
- When "RESET" was pressed, display returns to the default display setting.

17. SERVICE PARTS : Rewrite a PD number of the module microcomputer to the parts recognition number for service.
Refer to "7.1.3 AUTOMATIC BACKUP OF DIGITAL VIDEO ASSY DATA".
For service recognition number: Modify the first column of the PD number to F
Caution: Only the EEPROM for the module microcomputer to modify the service recognition number.
A service identification number of module microcomputer data area in EEPROM for main microcomputer does not rewrite it.
Examples: F691 (an original PD number is 5691).

18. PICTURE DEFAULT
- The data which adjusted in the service factory mode reflect as default value of PICTURE, WHITE BAL and SIDE MASK LEVEL of the integrator menu.
- The value that adjusted in the service factory mode is not reflected to all video output data except the service factory mode so long as does not execute "PICTURE DEFAULT" or "FINAL SETUP".
- Execute "PICTURE DEFAULT" after the adjustment for the value that adjusted in the service factory mode is reflected to video output data.

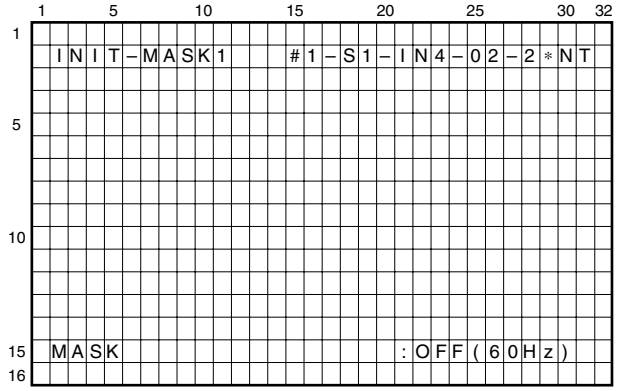
Note: When executed "PICTURE DEFAULT"
① All the PICTURE items of the user menu are reset.
② PICTURE, WHT BAL and SIDE MASK LEVEL of the integrator menu become default value all in base with the current factory adjustment value.

● **FINAL SETUP Details**

Items		Initial Setting	Remarks
Key Remote control input			
Power supply (STANDBY/ON)			NO CARE
Input function		INPUT1	
Screen size	VIDEO	WIDE	(In the video signal input) Every each input function
	PC	① DOT BY DOT	(In the PC signal input) Every each input function and signal mode Priority sequence is ① → ② → ③
		② 4 : 3 (incluted TYPE)	
		③ FULL (incluted TYPE)	
Vertical position adjustment (V scroll)		0	Every each input function (at VIDEO)
KEY LOCK		UNLOCK	All input functions are common
VOLUME		0	
User menu setting item			
PICTURE		Default value of all adjustment	Every each input function and signal mode
SCREEN		Default value of all adjustment	Every each input function and signal mode (at PC)
INPUT LABEL		□INPUT∗□	(∗: 1 to 5). Every each input function
AUTO POWER OFF		OFF	Every each input function
POWER MANAGEMENT		OFF	INPUT1 (at PC) /5
COLOR TEMP		MIDDLE	Every each input function (at VIDEO)
DIGITAL NR		LOW	
HIGH CONTRAST		OFF	
PURECINEMA		OFF	Every each input function (at 525i (NTSC))
COLOR SYSTEM		AUTO	Every each INPUT3/4
CLAMP POSITION		AUTO	Every each INPUT1/2
3D Y/C MODE		MOTION	INPUT 4
SETTING		VGA (at mode03, 31, E1)	Every INPUT 1/2
		XGA (at mode61, 71, 63, 73)	
VIDEO SIGNAL		RGB	
POWER CONTROL		STANDARD	(VIDEO/PC) All input functions are common
AUTO FUNCTION		OFF	All input functions are common
AUDIO OUT		FIXED	
Integrator menu setting item			
PICTURE		Default value of all adjustment items	Every each input function and signal mode
WHITE BALANCE		Default value of all adjustment items	
SCREEN		Default value of all adjustment items	
2×2 MODE		OFF/Upper left	Every each input function
BRT. ENHANCE	VIDEO	OFF	
	PC	OFF	Every each function that the PC input is possible
HDTV MODE		1035i	All input functions are common
VIDEO INPUT		COMPONENT1	750p/1125i/1125p
		COMPONENT2	525i/525p/625i/625p
SUB VOLUME		60	Every input function
OSD		ON	Set is common
BAUD RATE		4800BPS	
TIMER		OFF/1/0.0/WHT	(Setting/Timer time/Mask time/mask color) All input functions are common

Items		Initial Setting	Remarks
FULL MASK		OFF	Set is common
SIDE MASK	R LEVEL	Default value	
	G LEVEL	Default value	
	B LEVEL	Default value	
MASK CONTROL		ON	
ORBITER MODE		OFF	
INVERSE MODE		OFF	
COLOR MODE		MODE1	Set is common
MIRROR MODE		OFF	Set is common
FAN CONTROL		AUTO	
MONITOR NAME		□□□PLASMA□□□	
ID NO SET		– –	
SLOT INPUT		VIDEO (RGB)	
Factory Setting Item			
INTE MODE		UNLOCK	Set is common
MASK1/2 setting		OFF	
ACL SW		ON	
COLOR DET			NO CARE
RS-232C Setting Item			
VIDEO MUTE		OFF	Set is common
LED		ON	
100% display		OFF	

① MASK1



Display color : White
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

•Basic Operation

Perform the adjustment of each parameter.

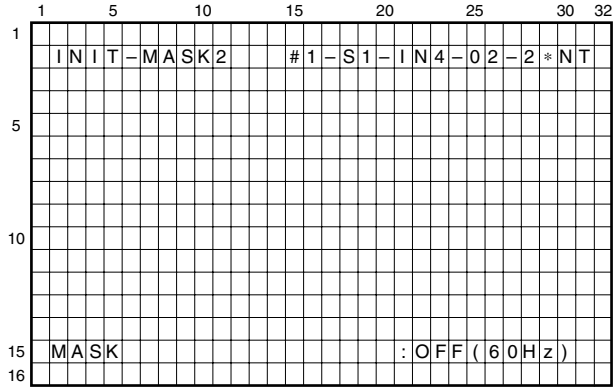
Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	OFF		OFF	×
AA02	2	MASK51		White	×
AA03	3	MASK52		Cyan 274	×
AA04	4	MASK53		Mazenta 1023	×
AA05	5	MASK54		Flesh color	×
AA06	6	MASK55		Cyan 1023	×
AA07	7	MASK56		Light purple	×
AA08	8	MASK57		Sky blue	×
AA09	9	MASK58		Red	×
AA00	10	MASK59		Green	×
OAA46	11	MASK60		Blue	×
AA47	12	MASK61		Black	×
AA4D	BS1	MASK62		Red 779	×
AA4E	BS3	MASK63		Cyan 218	×
AA4F	BS5	MASK64		Cyan 444	×
AA50	BS7	MASK65		Flesh color 43	×
AA51	BS9	MASK66		Red 620	×
AA52	BS11				
AA53	BS13				
AA54	BS15				
		MASK67		FULLMASK (Mazenta 98)	×
		MASK68		FULLMASK (Sky blue1_43)	×
		MASK69		FULLMASK (Sky blue2_43)	×
		MASK70		FULLMASK (Light purple43)	×
		MASK71		FULLMASK (Yellow)	×
		MASK72		FULLMASK (Blue916)	×
		MASK73		FULLMASK (Reservation)	×
		MASK74		FULLMASK (Reservation)	×
AA96	▲	Select the upper item			
AA97	▼	Select the lower item			
AA94	≫	Select free-running frequency	••→50Hz→60Hz→70Hz→••	Default is 60 Hz	
AA95	≪	Select free-running frequency	••→50Hz→60Hz→70Hz→••	Default is 60 Hz	
AA8A	SET	Store the selected item and shift to upper layer			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	INFORMATION		

•Operating specification

- Start from MASK OFF (Key1) when shifted to this setting screen. However, set MASK position is a default when sets an either mask already.
- When entered this mode by the state that either MASK set of MASK2, setting of MASK2 is off, and MASK1 starts from MASK OFF (Key1).
- MASK67-MASK74 are not assigned to the direct key, it is selectable only with up and down ("▲","▼")keys.
- When a key was pressed, follow the required operation after performed the last memory of the current adjustment value.

Caution: In the MASK display, do not display the OSD.
When other operations were selected, perform OSD display after MASK OFF for two seconds.
Then return to selected FULL MASK display.

② MASK2



Display color : White
Half tone : Blue (second row / 15th row for each 1 to 32th columns)

●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	MASK OFF		OFF	×
AA02	2	MASK 01		Pattern 1 (Ramp)	×
AA03	3	MASK 02		Pattern 2 (Color-bar)	×
AA04	4	MASK 03		Pattern 3 (Slanting line)	×
AA05	5	MASK 04		Pattern 4 (For W/B Lo-Light adjustment 1/5Window (14%, 56%))	×
AA06	6	MASK 05		Pattern 5 (For W/B Lo-Light adjustment 1/5Window (Pred, Skin))	×
AA07	7	MASK 06		Pattern 6 (For W/B Peak adjustment 1/5Window (100%))	×
AA08	8	MASK 07		Pattern 7 (Peak signal : For peak measurement and adjustment 1/5Window (100%))	×
AA09	9	MASK 08		Pattern 8 (Reservation)	×
AA00	10	MASK 09		Pattern 9 (For scan IC protection test Window-A)	×
AA46	11	MASK 10		Pattern 10 (For scan IC protection test Window-B)	×
AA47	12	MASK 11		Pattern 11 (Reservation)	×
AA4D	BS1	MASK 12		Pattern 12 (Reservation)	×
AA4E	BS3	MASK 13		Pattern 13 (Reservation)	×
AA4F	BS5	MASK 14		Pattern 14 (Reservation)	×
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Select the upper item			
AA97	▼	Select the lower item			
AA94	≫	Select free-running frequency	••→50Hz→60Hz→70Hz→••	Default is 60 Hz	
AA95	≪	Select free-running frequency	••→50Hz→60Hz→70Hz→••	Default is 60 Hz	
AA8A	SET	Store the selected item and shift to upper layer			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shift to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shift to next adjustment / setting screen.	INFORMATION		

●Operating specification

- Start from MASK OFF (Key1) when shifted to this setting screen. However, set MASK position is a default when sets an either mask already.
- When entered this mode by the state that either MASK set of MASK1, setting of MASK1 is off, and MASK 2 starts from MASK OFF (Key1).
- MASK67-MASK74 are not assigned to the direct key, it is selectable only with up and down ("▲","▼")keys.
- When a key was pressed, follow the required operation after performed the last memory of the current adjustment value.

Caution: In the MASK display, do not display the OSD.
When other operations were selected, perform OSD display after MASK OFF for two seconds.
Then return to selected MASK display.

● **Cassification 1 of Input Signal Mode (VIDEO)**

SIG Mode	Signal Type	OSD display	V. Frequency fv (Hz)	H. Frequency fh (Hz)	Display Pixel Number	INPUT5 (DVI input) Correspondence
00 • 6 00 • 7 00 • 8 00 • 9	SDTV • 625i (PAL/SECAM)	4 : 3 FULL ZOOM WIDE	50	15.6	784 × 768 1024 × 768 1024 × 768 1024 × 768	× (no-correspondence)
01 • 6 01 • 7 01 • 8 01 • 9	SDTV • 625p (PAL • Progressive)	4 : 3 FULL ZOOM WIDE	50	31.2	784 × 768 1024 × 768 1024 × 768 1024 × 768	× (no-correspondence)
02 • 6 02 • 7 02 • 8 02 • 9	SDTV • 525i (NTSC/4.43NTSC)	4 : 3 FULL ZOOM WIDE	60	15.7	784 × 768 1024 × 768 1024 × 768 1024 × 768	× (no-correspondence)
03 • 6 03 • 7 03 • 8 03 • 9	SDTV • 525p (NTSC • Progressive)	4 : 3 FULL ZOOM WIDE	60	31.5	784 × 768 1024 × 768 1024 × 768 1024 × 768	× (no-correspondence)
11 • 7	HDTV • 1125i (1080 number of effective scanning lines)	FULL	50	28.1	1024 × 768	× (no-correspondence)
12 • 7	HDTV • 1125i (1080 number of effective scanning lines)	FULL	60	33.8	1024 × 768	× (no-correspondence)
13 • 7	HDTV • 1125i (1035 number of effective scanning lines)	FULL	60	33.8	1024 × 768	× (no-correspondence)
14 • 7	HDTV • 750p (720 number of effective scanning lines)	FULL	60	45.0	1024 × 768	× (no-correspondence)
15 • 7	HDTV • 1125p (1080 number of effective scanning lines)	FULL	60	67.5	1024 × 768	× (no-correspondence)

● **Classification 2 of Input Signal Mode (PC)**

SIG Mode	Signal Type	OSD Display	V. Frequency v (Hz)	H. Frequency h (Hz)	Display Pixel Number	INPUT5 (DVI input) Correspondence
20 • 2	640 × 400	FULL	56	24.8	1024 × 768	× (non-correspondence)
23 • 2	640 × 400	FULL	79	31.5	1024 × 768	× (non-correspondence)
31 • 0 31 • 1 31 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	60	31.5	640 × 480 768 × 768 1024 × 768	❍ (correspondence)
32 • 0 32 • 1 32 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	67	35.0	640 × 480 768 × 768 1024 × 768	× (non-correspondence)
34 • 0 34 • 1 34 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	73	37.9	640 × 480 768 × 768 1024 × 768	× (non-correspondence)
35 • 0 35 • 1 35 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	75	37.5	640 × 480 768 × 768 1024 × 768	× (non-correspondence)
36 • 0 36 • 1 36 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	85	43.3	640 × 480 768 × 768 1024 × 768	× (non-correspondence)
40 • 4 40 • 1 40 • 2	800 × 600	DOT BY DOT 4 : 3 (TYPE) FULL	56	35.2	800 × 600 768 × 768 1024 × 768	❍ (correspondence)
41 • 0 41 • 1 41 • 2	800 × 600	DOT BY DOT 4 : 3 (TYPE) FULL	60	37.9	800 × 600 768 × 768 1024 × 768	❍ (correspondence)
44 • 0 44 • 1 44 • 2	800 × 600	DOT BY DOT 4 : 3 (TYPE) FULL	72	48.1	800 × 600 768 × 768 1024 × 768	× (non-correspondence)
45 • 0 45 • 1 45 • 2	800 × 600	DOT BY DOT 4 : 3 (TYPE) FULL	75	46.9	800 × 600 768 × 768 1024 × 768	× (non-correspondence)
46 • 0 46 • 1 46 • 2	800 × 600	DOT BY DOT 4 : 3 (TYPE) FULL	85	53.7	800 × 600 768 × 768 1024 × 768	× (non-correspondence)
55 • 0 55 • 1 55 • 2	832 × 624	DOT BY DOT 4 : 3 (TYPE) FULL	75	49.7	832 × 624 768 × 768 1024 × 768	× (non-correspondence)
61 • 1 61 • 2	1024 × 768	4 : 3 (TYPE) DOT BY DOT	60	48.4	768 × 768 1024 × 768	❍ (correspondence)
63 • 1 63 • 2	1024 × 768	4 : 3 (TYPE) DOT BY DOT	70	56.5	768 × 768 1024 × 768	× (non-correspondence)
65 • 1 65 • 2	1024 × 768	4 : 3 (TYPE) DOT BY DOT	75	60.0	768 × 768 1024 × 768	× (non-correspondence)
66 • 1 66 • 2	1024 × 768	4 : 3 (TYPE) DOT BY DOT	85	68.7	768 × 768 1024 × 768	× (non-correspondence)
70 • 2	1280 × 768	FULL (TYPE)	56	45.1	1024 × 768	❍ (correspondence)
71 • 2	1280 × 768	FULL (TYPE)	60	48.1	1024 × 768	❍ (correspondence)
73 • 2	1280 × 768	FULL (TYPE)	70	56.1	1024 × 768	× (non-correspondence)

SIG Mode	Signal Type	OSD Display	V. Frequency v (Hz)	H. Frequency h (Hz)	Display Pixel Number	INPUT5 (DVI input) Correspondence
81 • 1 81 • 2	1152 × 864	4 : 3 (TYPE) FULL (TYPE)	60	53.7	768 × 768 1024 × 768	❍ (correspondence)
84 • 1 84 • 2	1152 × 864	4 : 3 (TYPE) FULL (TYPE)	72	64.9	768 × 768 1024 × 768	× (non-correspondence)
85 • 1 85 • 2	1152 × 864	4 : 3 (TYPE) FULL (TYPE)	75	67.5	768 × 768 1024 × 768	× (non-correspondence)
95 • 1 95 • 2	1152 × 870	4 : 3 (TYPE) FULL (TYPE)	75	68.7	762 × 768 1024× 768	× (non-correspondence)
A2 • 1 A2 • 2	1152 × 900	4 : 3 (TYPE) FULL (TYPE)	66	61.8	738 × 768 1024 × 768	× (non-correspondence)
A5 • 1 A5 • 2	1152 × 900	4 : 3 (TYPE) FULL (TYPE)	76	71.7	738 × 768 1024 × 768	× (non-correspondence)
B1 • 1 B1 • 2	1280 × 960	4 : 3 (TYPE) FULL (TYPE)	60	60.0	768 × 768 1024 × 768	❍ (correspondence)
C1 • 1 C1 • 2	1280 × 1024	4 : 3 (TYPE) FULL (TYPE)	60	64.0	720 × 768 1024 × 768	❍ (correspondence)
C5 • 1 C5 • 2	1280 × 1024	4 : 3 (TYPE) FULL (TYPE)	75	80.0	720 × 768 1024 × 768	× (non-correspondence)
C6 • 1 C6 • 2	1280 × 1024	4 : 3 (TYPE) FULL (TYPE)	85	91.1	720 × 768 1024 × 768	× (non-correspondence)
D1 • 1 D1 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	60	75.0	768 × 768 1024 × 768	× (non-correspondence)
D2 • 1 D2 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	65	81.3	768 × 768 1024 × 768	× (non-correspondence)
D3 • 1 D3 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	70	87.5	768 × 768 1024 × 768	× (non-correspondence)
D5 • 1 D5 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	75	93.8	768 × 768 1024 × 768	× (non-correspondence)
D6 • 1 D6 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	85	106.3	768 × 768 1024 × 768	× (non-correspondence)
E1 • 1 E1 • 2	852 × 480	DOT BY DOT FULL	60	31.7	852 × 768 1024 × 768	❍ (correspondence)

6.2 ADJUSTMENT REQUIRED WHEN THE SET IS REPAIRED OR REPLACED

■ RGB Assy

• When repaired

1. Adjustment is impossible when replaced the Matrix IC or AD/PLL/AMP IC.
2. Adjustment is unnecessary in case of others.

• When replaced

Color balance adjustment

■ SW POWER SUPPLY Module

• When replaced

No adjustment required.

■ DIGITAL VIDEO Assy

• When repaired

No adjustment required.

• When replaced

1. Adjustment is unnecessary when replaced only the DIGITAL VIDEO Assy.
2. When replaced it with RGB Assy simultaneously, remove IC1204 (24LC04(1) SN-TBB) from the former PC Board to replace, and install it to the new PC Board.
3. When use new Assy which replaces it and recovered as service parts once again, replace IC1204 with new IC.

■ Y DRIVE Assy

• When repaired

1. VOFS/VH/IC5V voltage adjustment
2. Timing adjustment of pulse module

• When replaced

1. Panel white balance adjustment

■ X DRIVE Assy

• When repaired

1. VRN voltage adjustment
2. Timing adjustment of pulse module

• When replaced

1. Panel white balance adjustment

■ Video Card (PDA-5002)

For Adjustment, Refer to the service manual ARP3093 for PDA-5002

• When repaired

1. Y LEVEL adjustment
2. Color difference and TINT adjustment

• When replaced

No adjustment required.

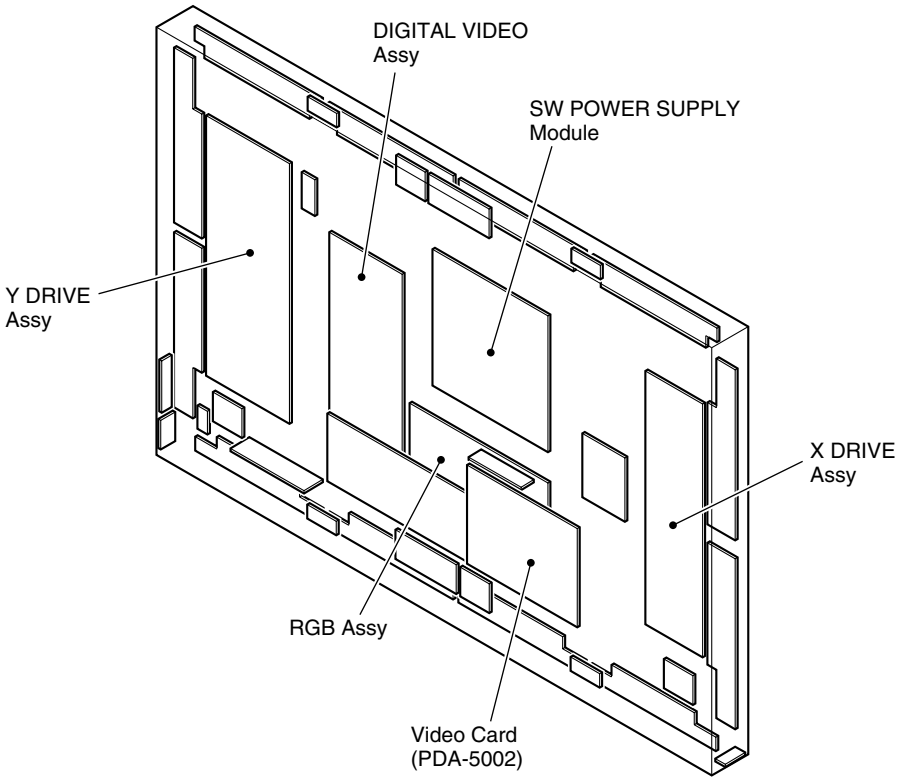


Fig. 1 PC Board Location (rear side view)

6.3 ADJUSTMENT

6.3.1 Main Unit Adjustment

■ VOFS/VH/IC5V Voltage Adjustment

<table>
<tr><th>Input Signal</th><th>Adjusting Point</th><th>Adjusting Method</th></tr>
<tr><td rowspan="4">White 100%</td><td>VR2701 (VOFS)
(Y DRIVE Assy)</td><td>
VOFS (Offset voltage) adjustment
Method 1
1. Write down a adjustment value of V-OFFSET of REF-DIG mode in the factory mode.
2. Set this adjustment value to center (128).
3. Adjust VR2701 so that the voltage between K2701 (VOFS) and K2703 (SUS GND) becomes 45V.
4. Return it to the value that wrote down a adjustment value of V-OFFSET in step 1.

Method 2
1. Read the adjustment value of V-OFFSET of REF-DIG mode in the factory mode.
2. Adjust VR2701 so that the voltage between K2710 (VOFS) and K2703 (SUS GND) becomes following voltage ± 0.5V.

<table>
<tr><th>Input Command</th><th>DAC Output</th><th>Setting Voltage</th><th>Input Command</th><th>DAC Output</th><th>Setting Voltage</th></tr>
<tr><td>VOF000</td><td>0.4</td><td>25</td><td>VOF134</td><td>2.599212598</td><td>45.94488</td></tr>
<tr><td>VOF006</td><td>0.4984375</td><td>25.9375</td><td>VOF141</td><td>2.71496063</td><td>47.04724</td></tr>
<tr><td>VOF013</td><td>0.61328125</td><td>27.03125</td><td>VOF147</td><td>2.814173228</td><td>47.99213</td></tr>
<tr><td>VOF019</td><td>0.71171875</td><td>27.96875</td><td>VOF153</td><td>2.913385827</td><td>48.93701</td></tr>
<tr><td>VOF026</td><td>0.8265625</td><td>29.0625</td><td>VOF160</td><td>3.029133858</td><td>50.03937</td></tr>
<tr><td>VOF032</td><td>0.925</td><td>30</td><td>VOF166</td><td>3.128346457</td><td>50.98425</td></tr>
<tr><td>VOF038</td><td>1.0234375</td><td>30.9375</td><td>VOF172</td><td>3.227559055</td><td>51.92913</td></tr>
<tr><td>VOF045</td><td>1.13828125</td><td>32.03125</td><td>VOF179</td><td>3.343307087</td><td>53.0315</td></tr>
<tr><td>VOF051</td><td>1.23671875</td><td>32.96875</td><td>VOF185</td><td>3.442519685</td><td>53.97638</td></tr>
<tr><td>VOF058</td><td>1.3515625</td><td>34.0625</td><td>VOF191</td><td>3.541732283</td><td>54.92126</td></tr>
<tr><td>VOF064</td><td>1.45</td><td>35</td><td>VOF198</td><td>3.657480315</td><td>56.02362</td></tr>
<tr><td>VOF070</td><td>1.5484375</td><td>35.9375</td><td>VOF204</td><td>3.756692913</td><td>56.9685</td></tr>
<tr><td>VOF077</td><td>1.66328125</td><td>37.03125</td><td>VOF211</td><td>3.872440945</td><td>58.07087</td></tr>
<tr><td>VOF083</td><td>1.76171875</td><td>37.96875</td><td>VOF217</td><td>3.971653543</td><td>59.01575</td></tr>
<tr><td>VOF090</td><td>1.8765625</td><td>39.0625</td><td>VOF223</td><td>4.070866142</td><td>59.96063</td></tr>
<tr><td>VOF096</td><td>1.975</td><td>40</td><td>VOF230</td><td>4.186614173</td><td>61.06299</td></tr>
<tr><td>VOF102</td><td>2.0734375</td><td>40.9375</td><td>VOF236</td><td>4.285826772</td><td>62.00787</td></tr>
<tr><td>VOF109</td><td>2.18828125</td><td>42.03125</td><td>VOF242</td><td>4.38503937</td><td>62.95276</td></tr>
<tr><td>VOF115</td><td>2.28671875</td><td>42.96875</td><td>VOF249</td><td>4.500787402</td><td>64.05512</td></tr>
<tr><td>VOF122</td><td>2.4015625</td><td>44.0625</td><td>VOF255</td><td>4.6</td><td>65</td></tr>
<tr><td>VOF128</td><td>2.5</td><td>45</td><td></td><td></td><td></td></tr>
</table>
The symptom is case of mis-adjustment
If the VOFS Voltage adjustment is not performed properly, dots like blinking luminance points appear. If deviated greatly from the right adjustment point, panel will light white.
</td></tr>
<tr><td>VR2703 (VH)
(Y DRIVE Assy)</td><td>
VH (voltage for scan IC) Adjustment
Adjust so that the voltage between K2716 (VH) and K2720 (PSUS) becomes 103V ± 0.5V. PSUS (=GNDH) is a floating GND and the electric potential is different from that of chassis GND. Be sure not to short-circuit PSUS (=GNDH) and another GND, because that may damage the unit.

The symptom is case of mis-adjustment
If the VH adjustment is not performed properly, dots like blinking luminance points appear. If deviated greatly from the right adjustment point, panel will light white.
</td></tr>
<tr><td>VR2702 (IC5V)
(Y DRIVE Assy)</td><td>
IC5V Adjustment
Adjust so that the voltage between K2707 (IC5V) and K2720 (PSUS) becomes 5.0V ± 0.1V. PSUS (=GNDH) is a floating GND and the electric potential is different from that of chassis GND. Be sure not to short-circuit PSUS (=GNDH) and another GND, because that may damage the unit.
</td></tr>
<tr><td colspan="2">Note : Be sure to measure between specified test points.</td></tr>
</table>

■ Sustain Pulse Waveform Adjustment

Input Signal	Adjusting Point	Adjusting Method
White 100%	REF_DIG mode in Factory mode X-SUS-B : key 9 Y-SUS-B : key 11	**X-SUS-B, Y-SUS-B Adjustment** Set to the indicated value with a key on the remote control unit. (Refer to "Timing adjustment of control signal of X and Y Drive Assys".)

■ VRN Voltage Adjustment

Input Signal	Adjusting Point	Adjusting Method
White 100%	VR3701 (VRN) (X DRIVE Assy)	**VRN (minus reset voltage adjustment)** Adjust so that the voltage between K3707 (VRN) and K3702 (SUS-GND) becomes -280V ± 1.0V.

■ Panel White Balance Adjustment

Input Signal	Adjusting Point	Adjusting Method
		Adjust the parameter in the OFFSET-DIGITAL of factory mode as follows; PANEL R-HIGH 〜 PANEL B-LOW In this time, dispay uses the mask (MASK04) of factory mode. Reference : Adjustment values using the Media color-difference meter (A-100)

	MASK Left Side	MASK Right Side
x	293	292
y	308	296

■ Mask Level Adjustment

Input Signal	Adjusting Point	Adjusting Method
———	VIDEO OPTION mode in Factory mode SIDE MASK LEV. R SIDE LEVEL : key 1 G SIDE LEVEL : key 2 B SIDE LEVEL : key 3	**Side mask color / Level Adjustment** Set the indicated value with the keys on the remote control unit.

■ Color Balance Adjustment

<table>
<tr><th>Input Signal</th><th>Adjusting Point</th><th>Adjusting Method</th></tr>
<tr><td>Fresh color</td><td>REFERENCE1 mode
in Factory mode
COLOR : key 3
TINT : key 4</td><td rowspan="2">Color Balance Adjustment
After adjusting the white balance, check the flesh color of figures in LD still pictures. If the color is not natural, adjust it with the keys on the remote control unit.

Reference : Adjustment values using the Media color-difference meter (A-100)
<table><tr><th></th><th></th><th></th><th>NTSC</th><th>HD</th><th>PC</th></tr><tr><td rowspan="6">White Balance</td><td rowspan="3">20% window-step signal (-3dB)</td><td>x</td><td>294</td><td>294</td><td>294</td></tr><tr><td>y</td><td>303</td><td>303</td><td>304</td></tr><tr><td>Y</td><td>6.9</td><td>6.9</td><td>2.8</td></tr><tr><td rowspan="3">80% window-step signal (-3dB)</td><td>x</td><td>293</td><td>293</td><td>297</td></tr><tr><td>y</td><td>301</td><td>301</td><td>312</td></tr><tr><td>Y</td><td>151</td><td>151</td><td>65</td></tr><tr><td rowspan="2">Flesh Color</td><td rowspan="2">Window chroma signal</td><td>x</td><td>423</td><td>423</td><td>–</td></tr><tr><td>y</td><td>363</td><td>363</td><td>–</td></tr></table></td></tr>
<tr><td></td><td></td></tr>
</table>

■ Timing Adjustment of X and Y DRIVE Assys Control Signal

- **Purpose**
  - Pulse module loads in DRIVE Assy as one of heat measures of DRIVE Assy. Adjust the drive timing of the pulse module driving parallel with VR.
  - Pulse module has each peculiar delay time. Readjustment is necessary when replaced the pulse module in the X and Y DRIVE Assys.
- **Adjustment Method**

  CR delay circuit is each inserted on signal path of four control signals (SUS-U, SUS-B, SUS-D, SUS-G) driving the pulse module.
  Quantity of delay can adjust pulse module of one side with VR.
  Adjust VR while measuring a waveform of the pulse module, and match a timing.

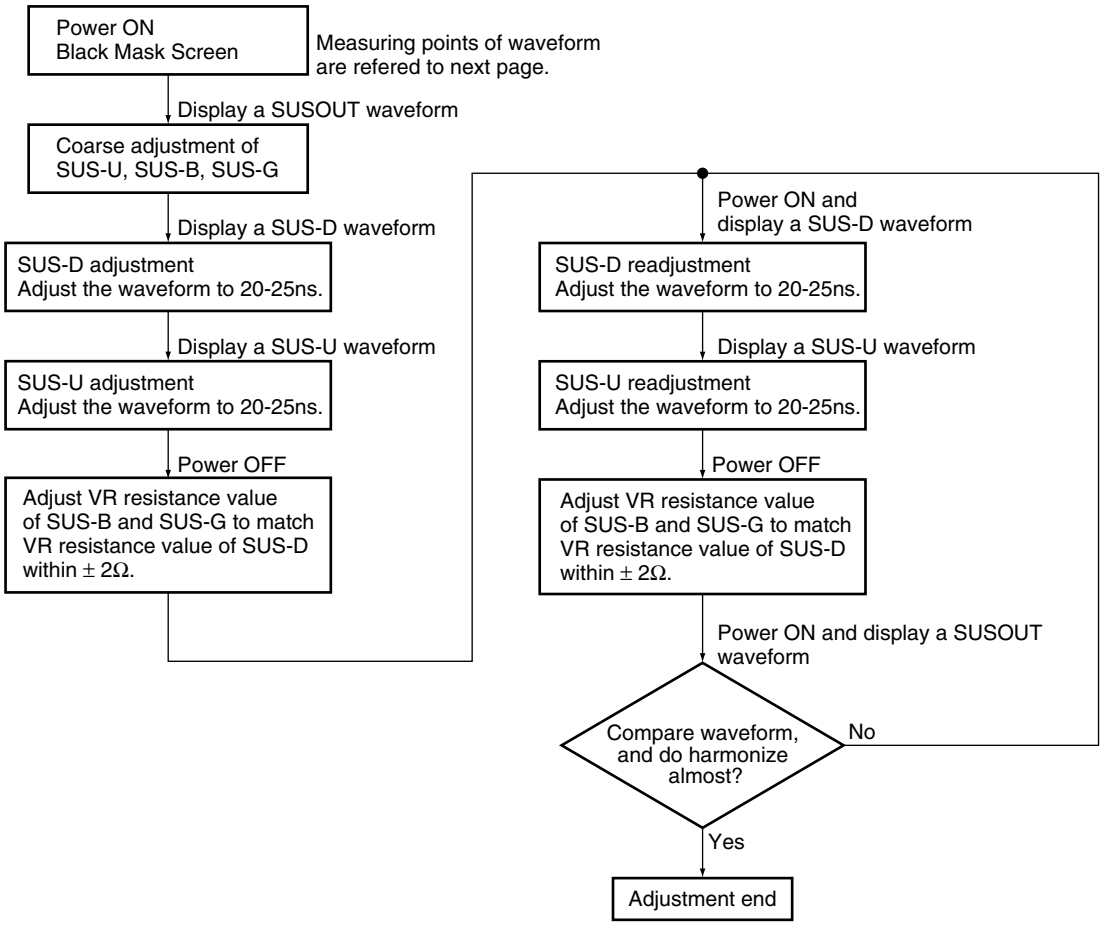
Adjustment VR

	X DRIVE	Y DRIVE
SUS-U	VR3203	VR2204
SUS-D	VR3202	VR2203
SUS-B	VR3201	VR2202
SUS-G	VR3200	VR2201

Test pin for adjustment and measurment

Pulse Module	X DRIVE		Y DRIVE	
	Upper	Lower	Upper	Lower
SUSOUT	K3105	K3106	K2212	K2203
SUS-U	K3200	K3204	K2220	K2224
SUS-D	K3108	K3205	K2207	K2225

- **Adjustment Procedure**


Power ON
Black Mask Screen
Measuring points of waveform are refered to next page.
Display a SUSOUT waveform
Coarse adjustment of SUS-U, SUS-B, SUS-G
Display a SUS-D waveform
SUS-D adjustment
Adjust the waveform to 20-25ns.
Display a SUS-U waveform
SUS-U adjustment
Adjust the waveform to 20-25ns.
Power OFF
Adjust VR resistance value of SUS-B and SUS-G to match VR resistance value of SUS-D within ± 2Ω.
Power ON and display a SUS-D waveform
SUS-D readjustment
Adjust the waveform to 20-25ns.
Display a SUS-U waveform
SUS-U readjustment
Adjust the waveform to 20-25ns.
Power OFF
Adjust VR resistance value of SUS-B and SUS-G to match VR resistance value of SUS-D within ± 2Ω.
Power ON and display a SUSOUT waveform
Compare waveform, and do harmonize almost?
No
Yes
Adjustment end

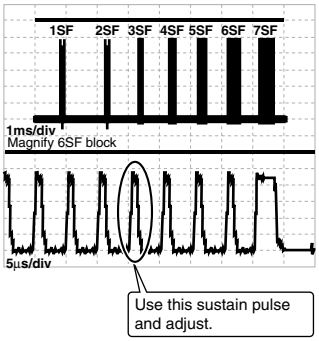
As for this adjustment, adjustment with set state is difficult.
Therefore replace it every Assy when replacing the pulse module.

Measuring Waveform of Pulse Module Timing Adjustment

Timing adjustment of the pulse module control signal adjusts with the sustain pulse of eighth pulse (X DRIVE) and the ninth pulse (Y DRIVE) from the back of 6SF.

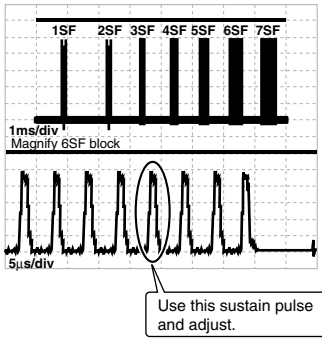
● Measuring point of waveform

Y DRIVE SUSOUT waveform



CH1 : Y SUSOUT Under (K2203), 50V/div
CH2 : Y SUSOUT Upper (K2212), 50V/div
CH4 : YPR-U1 (K2038)- Trigger, 5V/div
Trigger : 2msec delay

X DRIVE SUSOUT waveform



CH1 : X SUSOUT Under (K3106), 50V/div
CH2 : X SUSOUT Upper (K3105), 50V/div
CH4 : YPR-U1 (K2038)- Trigger, 5V/div
Trigger : 2msec delay

- Perform adjustment of waveform with a black mask screen.
- It is easy to adjust when turned field AB offset to OFF (RS-232C command: OCN) in adjustment.

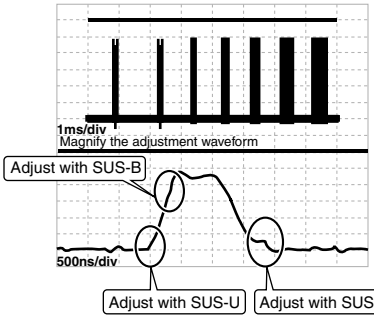
Note:
- Sampling rate of oscilloscope sets it more than 500MS/s in order to perform ns order adjustment.
- Collecting calibration of probe before adjustment by all means.

- Connect GND of probe measuring waveform to SUSGND terminal by all means.
- Precise waveform is not displayed, and an adjustment gap may occur that does not collect GND properly.

When took waveform be each drive Assy unit, measure it at the fourth sustain pulse from the back except for a large width sustain pulse.
Therefore, when measured both waveform of the X and Y drives together, it becomes the sustain pulse of 8 and 9 pulses from the back.

● Waveform coarse adjustment

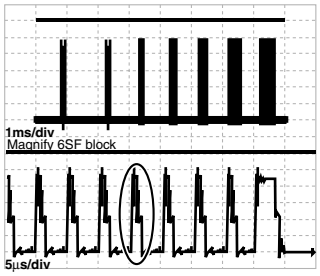
Measure the SUSOUT waveform



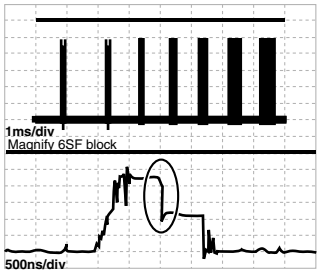
CH1 : Y SUSOUT Under (K2203), 50V/div
CH2 : Y SUSOUT Upper (K2212), 50V/div
CH4 : YPR-U1 (K2038)- Trigger, 5V/div
Trigger : 2msec delay

When there is a gap with waveform of CH1 / CH2 of the part which enclosed in the following circle, adjust required VR to overlap the waveform.

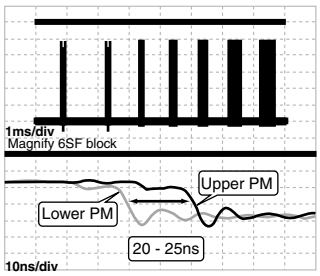
● SUS-D Adjustment (Y DRIVE)



Magnification



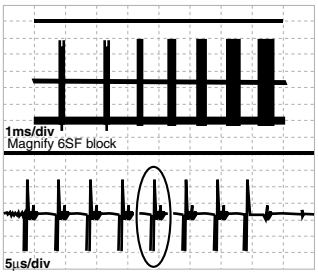
Magnification



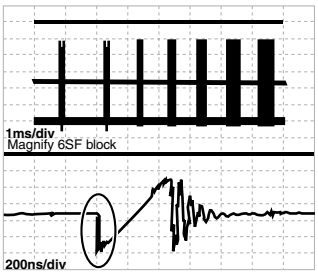
CH1 : Y SUS-D Under (K2225), 50V/div
CH2 : Y SUS-D Upper (K2207), 50V/div
CH4 : YPR-U1 (K2038)- Trigger, 5V/div
Trigger : 2msec delay

Caution:
Not absolutely mistaking upper and lower of waveform.

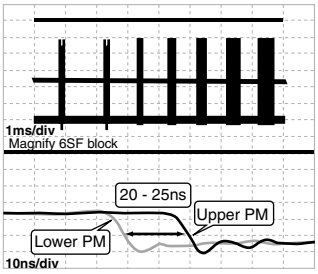
● SUS-U Adjustment (Y DRIVE)



Magnification



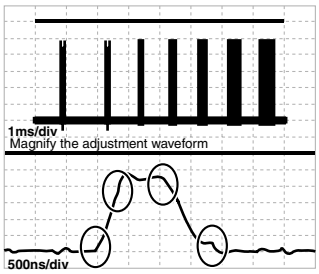
Magnification



CH1 : Y SUS-U Under (K2224), 50V/div
CH2 : Y SUS-U Upper (K2220), 50V/div
CH4 : YPR-U1 (K2038)- Trigger, 5V/div
Trigger : 2msec delay

● Waveform Confirmation in Adjustment completion

Measure the SUSOUT waveform



CH1 : Y SUSOUT Under (K2203), 50V/div
CH2 : Y SUSOUT Upper (K2212), 50V/div
CH4 : YPR-U1 (K2038)- Trigger, 5V/div
Trigger : 2msec delay

Confirm it to waveform of CH1 / CH2 of the part which enclosed in the following circle whether there is not a large gap.
(A gap of the quantity that shifts 20nS and adjusted remains.)

When adjust in the power supply ON state, change so that the quantity of gap that adjusted by temperature-rise of the pulse module becomes small.
Therefore, perform high power OFF (RS-232C command: DRF) except measurement time of waveform when adjusts, and adjustment error by temperature-rise does not occur.

■ SUS-B Ground Timing Adjustment

It is necessary to readjust this adjustment when replaced the X or Y DRIVE Assy and the pulse module.

- **Measurement point and method**

Measurement point
X DRIVE Assy :
SUSOUT A : K3105 , GND : K3201
Y DRIVE Assy :
SUSOUT B : K32212 GND : K2219

Measurement screen : PC 60Hz at all black screen
RS-232C ommand
PC60Hz : F61, Black mask : M61
The measurement is easy to perform when turns field AB alternation to OFF. (RS-232C command: OCN)

Measurement procedure

Measure a sustain pulse of the fourth pulse (X DRIVE) and the fifth pulse (Y DRIVE) from the back of the 5th FS.
1. Check the ground voltage.
2. Shift a ground timing to the front till the ground voltage is below 180V enough.
3. Delays a ground timing by one clock, and set a ground timing to the best voltage that does not exceed 180V.

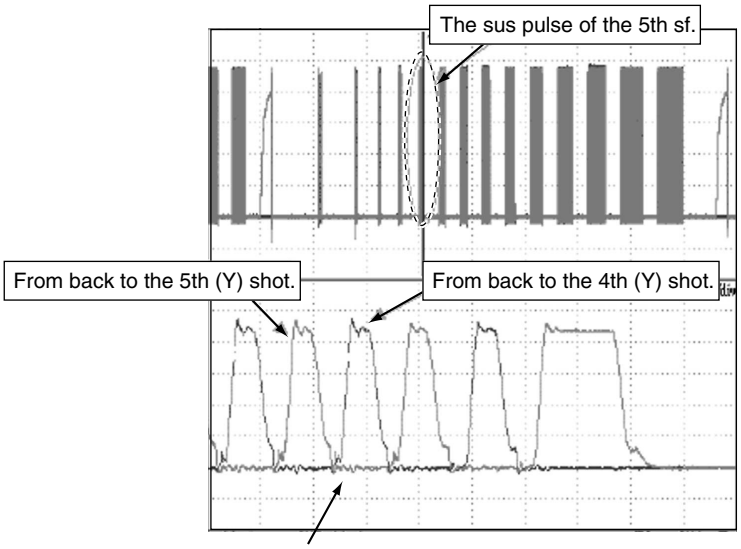
Adjustment parameter

X DRIVE: XSUSB (RS-232C command : XSB)
Y DRIVE: YSUSB (RS-232C command : YSB)

Note:

• Connect GND of probe measuring waveform to SUSGND terminal by all means.
• Precise waveform is not displayed, and an adjustment gap may occur that does not collect GND properly.

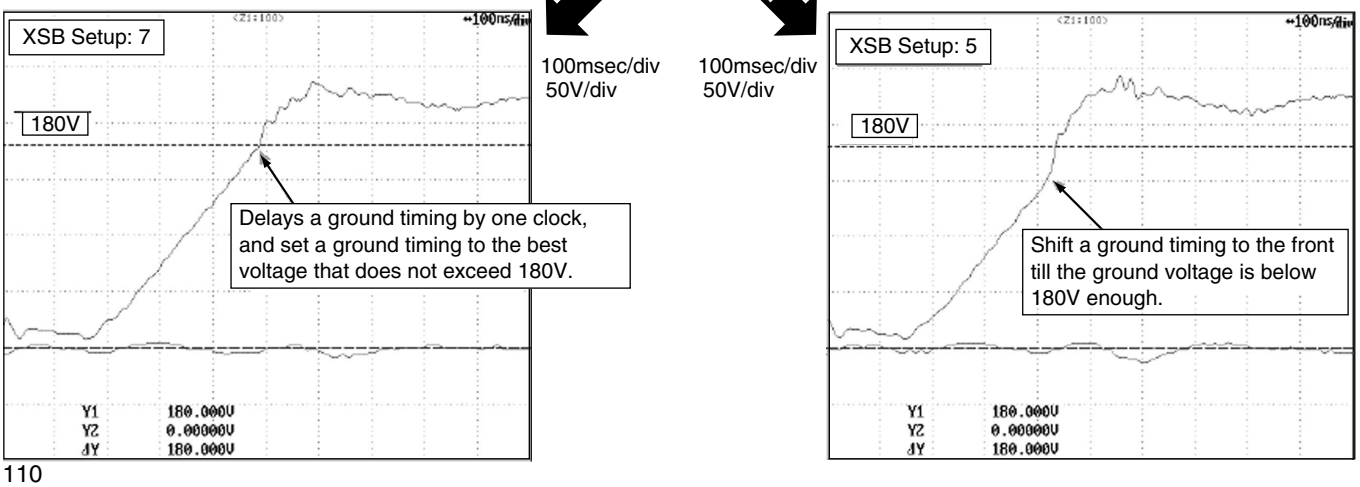
- **Waveform in the measurement**



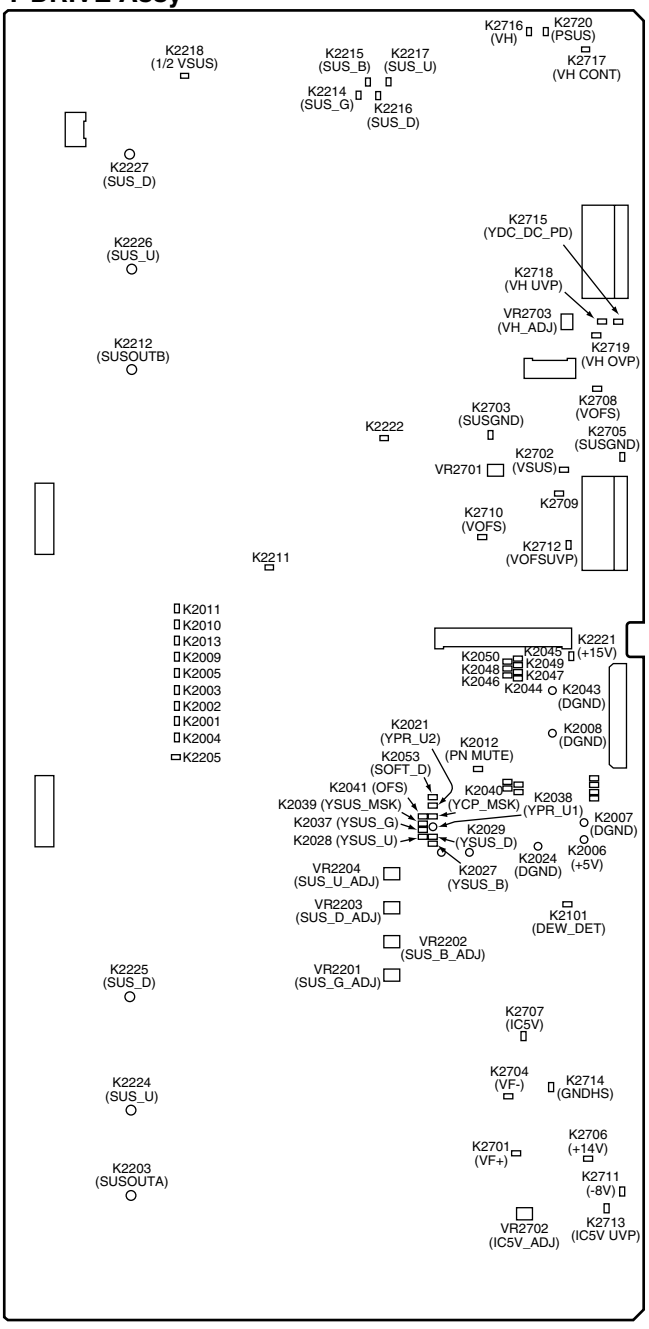
CH1 : Y SUSOUT (K2203), 50V/div
CH2 : X SUSOUT (K3106), 50V/div
CH4 : YPR-U1 (K2038)- Trigger, 5V/div
Trigger : 2msec delay

Measure a waveform of this section and adjust.

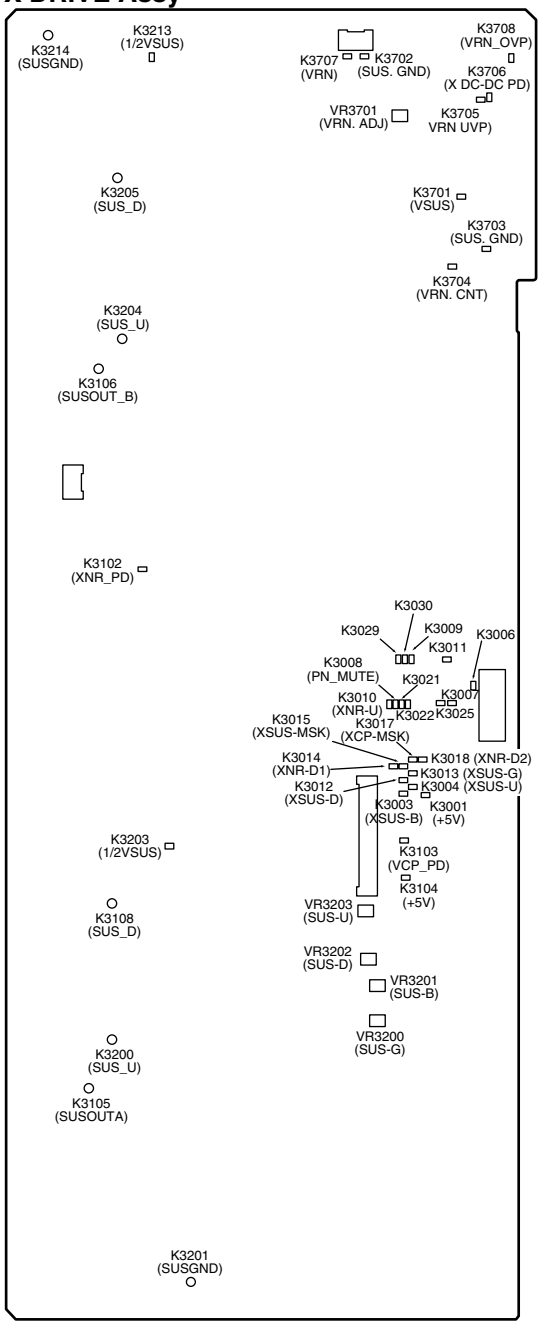
Magnify the fourth pulse sustain pulse (XSUSOUT waveform) from the back of the above waveform.


OK
NG
XSB Setup: 7
180V
Delays a ground timing by one clock, and set a ground timing to the best voltage that does not exceed 180V.
100msec/div
50V/div
100msec/div
50V/div
XSB Setup: 5
180V
Shift a ground timing to the front till the ground voltage is below 180V enough.

Y DRIVE Assy



X DRIVE Assy



Adjusting Points

6.4 COMMAND

6.4.1 RS-232C COMMAND (for adjustment)

	Command	Name	Function	RS-232C Factory	RS-232C Integrator	Normal Validity	Direct Validity	UP/DOWN Validity
A	ABL	ABL	ABL level adjustment	O	–	–	O	O
B	BRT	BRIGHT	Brightness adjustment	O	O	–	O	O
	BHI	B HIGH	B HIGH adjustment	O	O	–	O	O
	BLW	B LOW	B LOW adjustment	O	O	–	O	O
	BSL	B SIDE MASK LEVEL	B SIDE MASK LEVEL adjustment	O	O	–	O	O
	BHA	AD B HIGH	AD B HIGH adjustment	O	–	–	O	O
	BLA	AD B LOW	AD B LOW adjustment	O	–	–	O	O
C	CNT	CONTRAST	Contrast adjustment	O	O	–	O	O
	COL	COLOR	Color adjustment	O	O	–	O	O
	CDR	CDR OFFSET	CDR OFFSET adjustment	O	–	–	O	O
	CDB	CDB OFFSET	CDB OFFSET adjustment	O	–	–	O	O
	CTI	CD TINT	Chroma decode TINT adjustment	O	–	–	O	O
	CPH	CLOCK PHASE	PLL phase adjustment	O	O	–	O	O
	CFR	CLOCK FREQUENCY	PLL frequency adjustment	O	O	–	O	O
D	DW0	DOWN 10	Turn the adjustment value to 10 DOWN	O	O	O	–	–
	DWn	DOWN n	Turn the adjustment value to n DOWN (n = 1, 2,• • • 8, 9)	O	O	O	–	–
	DWF	DOWN FULL	Turn the adjustment value to minimum	O	O	O	–	–
G	GHI	G HIGH	G HIGH adjustment	O	O	–	O	O
	GLW	G LOW	G LOW adjustment	O	O	–	O	O
	GSL	G SIDE MASK LEVEL	G SIDE MASK LEVEL adjustment	O	O	–	O	O
	GHA	AD G HIGH	AD G HIGH adjustment	O	–	–	O	O
	GLA	AD G LOW	AD G LOW adjustment	O	–	–	O	O
L	LRY	R-Y LEVEL	R-Y level adjustment	O	–	–	O	O
	LBY	B-Y LEVEL	B-Y level adjustment	O	–	–	O	O
M	MCT	MAT CONTRAST	MAT CONTRAST adjustment	O	–	–	O	O
	MBR	MAT BRIGHT	MAT BRIGHT adjustment	O	–	–	O	O
	MCL	MAT COLOR	MAT COLOR adjustment	O	–	–	O	O
	MTI	MAT TINT	MAT TINT adjustment	O	–	–	O	O
	MCA	AD MAIN CONTRAST	AD MAIN CONTRAST adjustment	O	–	–	O	O
P	PBH	PANEL BLUE HIGH	BLUE HIGH-LIGHT adjustment	O	–	–	O	O
	PBL	PANEL BLUE LOW	BLUE LOW-LIGHT adjustment	O	–	–	O	O
	PGH	PANEL GREEN HIGH	GREEN HIGH-LIGHT adjsutment	O	–	–	O	O
	PGL	PANEL GREEN LOW	GREEN LOW-LIGHT adjustment	O	–	–	O	O
	PRH	PANEL RED HIGH	RED HIGH-LIGHT adjustment	O	–	–	O	O
	PRL	PANEL RED LOW	RED LOW-LIGHT adjustment	O	–	–	O	O
R	RHI	R HIGH	R HIGH adjustment	O	O	–	O	O
	RLW	R LOW	R LOW adjustment	O	O	–	O	O
	RSL	R SIDE MASK LEVEL	R SIDE MASK LEVEL adjustment	O	O	–	O	O
	RHA	AD R HIGH	AD R HIGH adjustment	O	–	–	O	O
	RLA	AD R LOW	AD R LOW adjustment	O	–	–	O	O
S	SV1	SUB VOLUME INPUT1	Adjust the sub-volume of INPUT1	O	O	–	O	O
	SV2	SUB VOLUME INPUT2	Adjust the sub-volume of INPUT2	O	O	–	O	O
	SV3	SUB VOLUME INPUT3	Adjust the sub-volume of INPUT3	O	O	–	O	O
	SV4	SUB VOLUME INPUT4	Adjust the sub-volume of INPUT4	O	O	–	O	O
	SV5	SUB VOLUME INPUT5	Adjust the sub-volume of INPUT5	O	O	–	O	O
	SHP	H.SHARP	H.SHARP/H.ENHANCE adjustment	O	O	–	O	O
	SHV	V.SHARP	V.SHARP/V.ENHANCE adjustment	O	O	–	O	O
T	TNT	TINT	TINT adjustment	O	O	–	O	O
U	UP0	UP10	Turn the adjustment value to 10 UP	O	O	O	–	–
	UPn	UPn	Turn the adjustment value to n UP (n = 1,2• • • 8,9)	O	O	O	–	–
	UPF	UP FULL	Turn the adjustment value to maximum	O	O	O	–	–
V	VOF	VOFFSET ADJUST	Vofs adjustment	O	–	–	O	O
	VOL	VOLUME	Audio volume adjustment	O	O	O	O	O
	VSU	VSUS ADJUST	Vsus adjustment	O	–	–	O	O
	VPS	VERTICAL POSITION	Adjust the vertical position	O	O	–	O	O
	VSI	VERTICAL SIZE	Adjust the vertical size	O	O	–	O	O
X	XSB	XSUS B	X-SUS-B pulse adjustment	O	–	–	O	O
	XSG	XSUS G	X-SUS-G pulse adjustment	O	–	–	O	O
Y	YSB	YSUS B	Y-SUS-B pulse adjustment	O	–	–	O	O
	YSG	YSUS G	Y-SUS-G pulse adjustment	O	–	–	O	O
	YDL	Y-DELAY	Y-DELAY adjustment	O	–	–	O	O
	YOL	Y-OUT LEVEL	Y-OUT LEVEL adjustment	O	–	–	O	O

6.4.2 RS-232C COMMAND (for setting)

	Command	Name	Function	RS-232C Factory	RS-232C Integrator	Normal Validity	Direct Validity	UP/DOWN Validity
A	AJN	ADJUST NO	Complete the RS-232C integrator mode	–	O	–	–	–
	AJY	ADJUST YES	Start the RS-232C integrator mode	–	–	O	–	–
	AMN	AUDIO MUTE NO	Turn the audio mute to OFF	O	O	O	–	–
	AMY	AUDIO MUTE YES	Turn the audio mute to ON	O	O	O	–	–
	AB0	ABL MODE0	Set the ABL setting to MODE0 (REFERENCE)	O	–	–	–	–
	AB1	ABL MODE1	Set the ABL setting to MODE1 (PC)	O	–	–	–	–
	AB2	ABL MODE2	Set the ABL setting to MODE2 (VIDEO60Hz)	O	–	–	–	–
	AB3	ABL MODE3	Set the ABL setting to MODE3 (VIDEO50Hz)	O	–	–	–	–
B	BBY	VIDEO RGB YES	Set the signal format to VIDEO RGB	O	O	–	–	–
	BR1	BAUD RATE1	Set the RS-232C baud rate to 1200BPS	O	O	–	–	–
	BR2	BAUD RATE2	Set the RS-232C baud rate to 2400BPS	O	O	–	–	–
	BR3	BAUD RATE3	Set the RS-232C baud rate to 4800BPS	O	O	–	–	–
	BR4	BAUD RATE4	Set the RS-232C baud rate to 9600BPS	O	O	–	–	–
	BR5	BAUD RATE5	Set the RS-232C baud rate to 19200BPS	O	O	–	–	–
	BR6	BAUD RATE6	Set the RS-232C baud rate to 38400BPS	O	O	–	–	–
C	CM1	COLOR MODE 1	Set to COLOR MODE 1	O	O	O	–	–
	CM2	COLOR MODE 2	Set to COLOR MODE 2	O	O	O	–	–
	CP1	VIDEO COMPONENT1 YES	Set the signal format to VIDEO COMPONENT1	O	O	–	–	–
	CP2	VIDEO COMPONENT2 YES	Set the signal format to VIDEO COMPONENT2	O	O	–	–	–
	CDE	COLOR DETECT EURO	Set the color detect to EURO	O	O	–	–	–
	CDM	COLOR DETECT ALL	Set the color detect to ALL	O	O	–	–	–
	CDA	COLOR DETECT SA	Set the color detect to SA	O	O	–	–	–
	CT1	COLOR TEMP.1	Set the color temperature to -3000K equivalency	O	O	–	–	–
	CT2	COLOR TEMP.2	Set the color temperature to -2000K equivalency	O	O	–	–	–
	CT3	COLOR TEMP.3	Set the color temperature to ±0K equivalency	O	O	–	–	–
	CT4	COLOR TEMP.4	Set the color temperature to +1000K equivalency	O	O	–	–	–
	CT5	COLOR TEMP.5	Set the color temperature to +2000K equivalency	O	O	–	–	–
	CL1	CLAMP MODE1	Set the clamp position to AUTO	O	O	–	–	–
	CL2	CLAMP MODE2	Set the clamp position to fix	O	O	–	–	–
D	DIN	OSD DISPLAY NO	Prohibit OSD display	O	O	O	–	–
	DIY	OSD DISPLAY YES	Permit OSD display	O	O	O	–	–
	DOF	DISPLAY OFF	Turn the OSD display to OFF	O	O	O	–	–
	DRN	DRIVE ON	Turn the drive to ON	It is valid in the RS-232C factory and STB			–	–
	DRF	DRIVE OFF	Turn the drive to OFF				–	–
	DSP	INPUT SIGNAL DISPLAY	Display current input signal information	O	O	–	–	–
	DS2	DISPLAY2	Display current various information	O	O	–	–	–
E	EWY	EEPROM WRITE YES	Start the Plug & Play EEPROM writing mode	O	–	–	–	–
	EWN	EEPROM WRITE NO	Complete the Plug & Play EEPROM writing mode	O	–	–	–	–
F	FAN	FACTORY ADJUST NO	Complete the factory adjustment mode	O	–	–	–	–
	FAY	FACTORY ADJUST YES	Start the factory adjustment mode	–	–	O	–	–
	FST	FINAL SET UP	Turn various setting into the Shipping state	O	–	–	–	–
	FRP	FRESH POSITION	Initialize SCREEN value of integrator	O	O	–	–	–
	FCA	FAN CONTROL AUTO	Turn the fan roll control to AUTO	O	O	–	–	–
	FCM	FAN CONTROL MAX	Turn the fan roll control to MAX	O	O	–	–	–
	FMY	FULL MASK YES	Set to FULL MASK (white)	–	O	–	–	–
	FMR	FULL MASK RED	Set to FULL MASK (red)	–	O	–	–	–
	FMG	FULL MASK GREN	Set to FULL MASK (green)	–	O	–	–	–
	FMB	FULL MASK BLUE	Set to FULL MASK (blue)	–	O	–	–	–
	FMN	FULL MASK NO	Release the FULL MASK	–	O	–	–	–
	FXO	FIX OUTPUT	Set the audio output to fix	O	O	–	–	–
	F50	FREE RUN 50Hz	Set the free-running to Video 50Hz in the MASK setting	O	–	–	–	–
	F60	FREE RUN 60Hz	Set the free-running to Video 60Hz in the MASK setting	O	–	–	–	–
	F61	FREE RUN PC 60Hz	Set the free-running to Pc 60Hz in the MASK setting	O	–	–	–	–
	F70	FREE RUN 70Hz	Set the free-running to Video 70Hz in the MASK setting	O	–	–	–	–
G	GAJ	GET ADJUST	Get a various adjustment value of the display from EEPROM	O	–	–	–	–
	GPW	GET PANEL W/B	Get the panel W/B information from EEPROM	O	–	–	–	–
	GS1	GET STATUS 1	Get the version information of microcomputer from EEPROM	O	–	–	–	–
	GS2	GET STATUS 2	Get the PD information and temperature information from EEPROM	O	–	–	–	–
	GPS	GET POSITION DATA	TxD outputs the positioning data	O	O	O	–	–
	GSO	GET STATUS OPTION	TxD outputs data of various established state (OPTION)	O	O	O	–	–
	GSS	GET STATUS SET UP	TxD outputs data of various established state (SET UP)	O	O	O	–	–
	GAS	GET ADJUST SLOT	TxD outputs data of picture quality setting of SLOT	O	–	–	–	–
	GAR	GET ADJUST RGB	TxD outputs data of picture quality adjustment (RGB 1)	O	–	–	–	–

	Command	Name	Function	RS-232C Factory	RS-232C Integrator	Normal Validity	Direct Validity	UP/DOWN Validity
G	GWB	GET WHITE BALANCE	TxD outputs data of picture quality setting of RGB1	O	O	O	–	–
	GPD	GET POWER DOWN	TxD outputs POWER DOWN information	O	–	–	–	–
H	HCN	HIGH CONTRAST NO	Turn the high contrast setting to OFF	O	O	–	–	–
	HCY	HIGH CONTRAST YES	Turn the high contrast setting to ON	O	O	–	–	–
	HMS	HOUR METER SET	Set the hour meter to optional time	O	–	–	O	–
	HMD	HOUR METER DISP.	Display the hour meter	O	O	–	–	–
	H80	HDTV MODE 1080 i	Set the HDTV mode to 1080 i	O	O	–	–	–
	H35	HDTV MODE 1035 i	Set the HDTV mode to 1035 i	O	O	–	–	–
I	IN1	INPUT1	Selects INPUT1	O	O	O	–	–
	IN2	INPUT2	Selects INPUT2	O	O	O	–	–
	IN3	INPUT3	Selects INPUT3	O	O	O	–	–
	IN4	INPUT4	Selects INPUT4	O	O	O	–	–
	IN5	INPUT5	Selects INPUT5	O	O	O	–	–
	IMN	INTEGRATOR MODE NO	Set the integrator mode to LOCK	O	–	–	–	–
	IMY	INTEGRATOR MODE YES	Set the integrator mode to UNLOCK	O	–	–	–	–
	IDC	ID CLEAR	Clear the ID	O	O	–	–	–
	IDS	ID SET	Set the ID	O	O	–	O	–
K	KLN	KEY LOCK NO	Permit main unit key / remote control unit operation	O	O	–	–	–
	KLY	KEY LOCK YES	Prohibit main unit key / remote control unit operation	O	O	–	–	–
M	M00	MASK 00	Mask mode OFF	O	–	–	–	–
	M01	MASK 01	Pattern 1 (ramp)	O	–	–	–	–
	M02	MASK 02	Pattern 2 (color bar)	O	–	–	–	–
	M03	MASK 03	Pattern 3 (slanting line)	O	–	–	–	–
	M04	MASK 04	Pattern 4 (for W/B measurement)	O	–	–	–	–
	M05	MASK 05	Pattern 5 (for W/B adjustment)	O	–	–	–	–
	M06	MASK 06	Pattern 6 (for W/B peak measurement)	O	–	–	–	–
	M07	MASK 07	Pattern 7 (for peak measurement)	O	–	–	–	–
	M08	MASK 08	Pattern 8 (reservation)	O	–	–	–	–
	M09	MASK 09	Pattern 9 (for SCAN IC protect test)	O	–	–	–	–
	M10	MASK 10	Pattern 10 (for SCAN IC protect test)	O	–	–	–	–
	M11	MASK 11	Pattern 11 (reservation)	O	–	–	–	–
	M12	MASK 12	Pattern 12 (reservation)	O	–	–	–	–
	M13	MASK 13	Pattern 13 (reservation)	O	–	–	–	–
	M14	MASK 14	Pattern 141 (reservation)	O	–	–	–	–
	M51	MASK 51	Full mask (white)	O	–	–	–	–
	M52	MASK 52	Full mask (cyan 274)	O	–	–	–	–
	M53	MASK 53	Full mask (mazenta 1023)	O	–	–	–	–
	M54	MASK 54	Full mask (fresh color)	O	–	–	–	–
	M55	MASK 55	Full mask (cyan 1023)	O	–	–	–	–
	M56	MASK 56	Full mask (light purple)	O	–	–	–	–
	M57	MASK 57	Full mask (sky blue)	O	–	–	–	–
	M58	MASK 58	Full mask (red)	O	–	–	–	–
	M59	MASK 59	Full mask (green)	O	–	–	–	–
	M60	MASK 60	Full mask (blue)	O	–	–	–	–
	M61	MASK 61	Full mask (black)	O	–	–	–	–
	M62	MASK 62	Full mask (red 779)	O	–	–	–	–
	M63	MASK 63	Full mask (cyan 218)	O	–	–	–	–
	M64	MASK 64	Full mask (cyan 444)	O	–	–	–	–
	M65	MASK 65	Full mask (fresh color 43)	O	–	–	–	–
	M66	MASK 66	Full mask (red 620)	O	–	–	–	–
	M67	MASK 67	Full mask (mazenta 98)	O	–	–	–	–
	M68	MASK 68	Full mask (sky blue1_43)	O	–	–	–	–
	M69	MASK 69	Full mask (sky blue2_43)	O	–	–	–	–
	M70	MASK 70	Full mask (light purple 43)	O	–	–	–	–
	M71	MASK 71	Full mask (yellow)	O	–	–	–	–
	M72	MASK 72	Full mask (blue 916)	O	–	–	–	–
	M73	MASK 73	Full mask (reservation)	O	–	–	–	–
	M74	MASK 74	Full mask (reservation)	O	–	–	–	–
	MG1	2X2MODE LEFT UPPER	Four enlarged setting: Upper left	O	O	–	–	–
	MG2	2X2MODE LEFT LOWER	Four enlarged setting: Lower left	O	O	–	–	–
	MG3	2X2MODE RIGHT UPPER	Four enlarged setting: Upper right	O	O	–	–	–
	MG4	2X2MODE RIGHT LOWER	Four enlarged setting: Lower right	O	O	–	–	–
	MGY	2X2MODE YES	Turn the four sides multi to ON	O	O	O	–	–
	MGN	2X2MODE NO	Turn the four sides multi to OFF	O	O	O	–	–

	Command	Name	Function	RS-232C Factory	RS-232C Integrator	Normal Validity	Direct Validity	UP/DOWN Validity
M	MMN	MIRROR MODE NO	Turn the mirror mode to OFF (normal display)	O	O	O	–	–
	MMX	MIRROR MODE X	Right and left reversing display	O	O	O	–	–
	MMY	MIRROR MODE Y	Top and bottom reversing display	O	O	O	–	–
	MMZ	MIRROR MODE XY	Top and bottom / right and left reversing display	O	O	O	–	–
	MTN	VIDEO MUTE NO	Turn the video mute of IC30 to OFF	O	O	O	–	–
	MTY	VIDEO MUTE YES	Turn the video mute of IC30 to ON	O	O	O	–	–
	MCY	MASK CONTROL YES	Permit automatic mask display position setting	O	O	–	–	–
	MCN	MASK CONTROL NO	Release automatic mask display position setting	O	O	–	–	–
N	NMY	NEGATIVE MODE YES	Turn the inverse mode (negative positive inverting) to ON	O	O	–	–	–
	NMN	NEGATIVE MODE NO	Turn the inverse mode (negative positive inverting) to OFF	O	O	–	–	–
	NTS	COLOR SYSTEM NTSC	Turn the COLOR SYSTEM setting to NTSC	O	O	–	–	–
	NT4	COLOR SYSTEM 4.43NTSC	Turn the COLOR SYSTEM setting to 4.43NTSC	O	O	–	–	–
	NRN	DIGITAL NR OFF	Turn the DIGITAL NR setting to OFF	O	O	–	–	–
	NRL	DIGITAL NR LOW	Turn the DIGITAL NR setting to LOW	O	O	–	–	–
	NRM	DIGITAL NR MIDDLE	Turn the DIGITAL NR setting to MIDDLE	O	O	–	–	–
	NRH	DIGITAL NR HIGH	Turn the DIGITAL NR setting to HIGH	O	O	–	–	–
O	OFY	OFFSET YES	Turn the OFFSET adjustment mode to ON	O	–	–	–	–
	OCY	FIELD OFFSET CHANGE YES	Turn the field AB offset to ON	O	–	–	–	–
	OCN	FIELD OFFSET CHANGE NO	Turn the field AB offset to OFF	O	–	–	–	–
	OMY	ORBITER MODE YES	Turn the orbiter mode to ON	O	O	–	–	–
	OMN	ORBITER MODE NO	Turn the orbiter mode to OFF	O	O	–	–	–
P	PAF	ACL SW OFF	Turn the ACL SW to OFF	O	–	–	–	–
	PAL	COLOR SYSTEM PAL	Turn the COLOR SYSTEM setting to PAL	O	O	–	–	–
	PAN	ACL SW ON	Turn the ACL SW to ON	O	–	–	–	–
	PCY	PC RGB YES	Turn the INPUT setting to PC: RGB (VGA or XGA)	O	O	–	–	–
	PWY	PC WIDE YES	Turn the INPUT setting to PC: RGB (WVGA or WXGA)	O	O	–	–	–
	PLN	BRIGHT ENHANCE OFF	Turn the center brightness correction function to OFF	O	O	–	–	–
	PLY	BRIGHT ENHANCE ON	Turn the center brightness correction function to ON	O	O	–	–	–
	PMS	PULSE METER SET	Set the pulse meter	O	–	–	O	–
	PMD	PULSE METER DISP	Display the pulse meter	O	–	–	–	–
	PMY	COLOR SYSTEM PAL-M	Turn the COLOR SYSTEM setting to PAL-M	O	O	–	–	–
	PNY	COLOR SYSTEM PAL-N	Turn the COLOR SYSTEM setting to PAL-N	O	O	–	–	–
	PON	POWER ON	Power ON	–	–	O	–	–
	POF	POWER OFF	Power OFF	O	O	O	–	–
	PT0	PANEL COLOR TEMP0	Panel color temperature 0 (REFERENCE value)	O	–	–	–	–
	PT1	PANEL COLOR TEMP1	Panel color temperature 1	O	–	–	–	–
	PT2	PANEL COLOR TEMP2	Panel color temperature 2	O	–	–	–	–
	PSN	AUTO POWER OFF OFF POWER MANAGEMENT OFF	Turn the AUTO POWER OFF / POWER MANAGEMENT setting to OFF	O	O	–	–	–
	PS1	AUTO POWER OFF ON	Turn the AUTO POWER OFF setting to ON	O	O	–	–	–
	PS2	POWER MANAGEMENT ON	Turn the POWER MANAGEMENT setting to ON	O	O	–	–	–
	PUN	PURECINEMA OFF	Turn the PURECINEMA to OFF	O	O	–	–	–
	PUS	PURECINEMA STANDARD	Turn the PURECINEMA to STANDARD	O	O	–	–	–
	PUH	PURECINEMA HQ	Turn the PURECINEMA to HQ (HIGH QUALITY)	O	O	–	–	–
	PWN	POWER CONTROL STANDARD	Turn the power control to OFF (STANDARD mode)	O	O	–	–	–
	PWL	CONTROL MODE1	Turn the power control to MODE1 (Power-saving mode)	O	O	–	–	–
	PWS	POWER CONTROL MODE2	Turn the power control to MODE2 (Longevity life mode)	O	O	–	–	–
	PDF	PICTURE DEFAULT	Execute PICTURE DEFAULT	O	–	–	–	–
R	RFY	REFERENCE YES	Start the reference adjustment mode	O	–	–	–	–
S	SCM	COLOR SYSTEM SECAM	Turn the COLOR SYSTEM setting to SECAM	O	O	–	–	–
	STD	STANDARD W/B	Return the PIC and W/B of integrator to factory default value	–	O	–	–	–
	SM0	SCREEN MODE 0	Turn the screen size to DOT BY DOT	O	O	O	–	–
	SM1	SCREEN MODE 1	Turn the screen size to 4:3	O	O	O	–	–
	SM2	SCREEN MODE 2	Turn the screen size to FULL	O	O	O	–	–
	SM3	SCREEN MODE 3	Turn the screen size to ZOOM	O	O	O	–	–
	SM5	SCREEN MODE 5	Turn the screen size to WIDE	O	O	O	–	–
	SLY	STILL YES	Turn the STILL setting to ON	O	O	O	–	–
	SLN	STILL NO	Turn the STILL setting to OFF	O	O	O	–	–
T	TVA	COLOR SYSTEM AUTO	Turn the COLOR SYSTEM setting to AUTO	O	O	–	–	–
V	VFY	VIDEO FULL DISPLAY YES	Start 100% display	–	–	O	–	–
	VFN	VIDEO FULL DISPLAY NO	Complete 100% display	–	–	O	–	–
	VRO	VARIABLE OUTPUT	Turn the audio output to variable	O	O	–	–	–
Y	YCM	3S Y/C MOTION	Turn the 3D Y/C setting to MOTION	O	O	–	–	–
	YCS	3D Y/C STILL	Turn the 3D Y/C setting to STILL	O	O	–	–	–

6.4.3 GET Command

● Command Description

Command	Function
GAJ	Output data of an electronic VR adjustment value and a drive system adjustment value
GPW	Output data to be related to white balance adjustment of the panel
GS1	Output data such as version information, hour meter and pulse meter
GS2	Output data of power down, temperature and dew drop information
GAS	Output data to be related to picture quality setting of SLOT
GAR	Output data to be related to picture quality (RGB1 of the factory menu)
GPD	Output POWER DOWN information (past eight times)
GPS	Output a SCREEN parameter
GWB	Output a parameter of PICTURE and WHITE BALANCE
GSS	Output various setting of the SET UP item of menu mode / integrator mode
GSO	Output various setting of the OPTION item of menu mode / integrator mode

GAJ: Output data of an electron VR adjustment value and a drive system adjustment value

• Output it according to transmission order and size of the table below.
• Command is invalid except RS-232C factory adjustment mode.

Order	Data Contents		Size	Remarks
1	Setting mode of electric power upper limit value		3 byte	AB* (*: 0 to 3)
2	Electric power upper limit value (ABL)	(Reference data)	3 byte	
3		(Offset data)	3 byte	(Note 1)
4	Vsus adjustment value	(Reference data)	3 byte	
5	Vofs adjustment value	(Reference data)	3 byte	
6	V-SUS-B adjustment value	(Reference data)	3 byte	
7	V-SUS-G adjustment value	(Reference data)	3 byte	
8	Y-SUS-B adjustment value	(Reference data)	3 byte	
9	Y-SUS-G adjustment value	(Reference data)	3 byte	

(Note 1) : When performed in reference mode selection, offset data outputs the same value as the reference data.

GPW (Get Panel White balance): Output data to be related to white balance adjustment of panel

• Output it according to transmission order and size of the table below.
• Command is invalid except RS-232C factory adjustment mode.

Order	Data Contents		Size	Remarks
1	Panel color temperature mode		3 byte	PT* (*: 0 to 3)
2	Gain of W/B adjustment value Red	(Reference data)	3 byte	
3		(Offset data)	3 byte	(Note 1)
4	Gain of W/B adjustment value Green	(Reference data)	3 byte	
5		(Offset data)	3 byte	(Note 1)
6	Gain of W/B adjustment value Blue	(Reference data)	3 byte	
7		(Offset data)	3 byte	(Note 1)
8	Offset of W/B adjustment value Red	(Reference data)	3 byte	
9		(Offset data)	3 byte	(Note 1)
10	Offset of W/B adjustment value Green	(Reference data)	3 byte	
11		(Offset data)	3 byte	(Note 1)
12	Offset of W/B adjustment value Blue	(Reference data)	3 byte	
13		(Offset data)	3 byte	(Note 1)

(Note 1) : When performed in reference mode selection, offset data outputs the same value as the reference data.

GS1: Output data such as version information, hour meter and pulse meter

• Output it according to transmission order and size of the table below.
• Command is invalid except RS-232C factory adjustment mode.

Order	Data Contents	Size	Remarks
1	Display information	3 byte	See below
2	Module microcomputer model number	4 byte	5691 or F691
3	Module microcomputer version	3 byte	
4	Panel microcomputer version	3 byte	
5	Panel /FLASH ROM version	3 byte	
6	Hour meter (hour)	5 byte	Unit: H (time)
7	Pulse meter	7 byte	Unit: 0.01G (10,000,000)
8	Main microcomputer model number	4 byte	5692
9	Main microcomputer version	3 byte	
10	Wide microcomputer version	3 byte	
11	Wide /FLASH ROM version	3 byte	

■ Display Information

Data	Model
MX5	PDP-503CMX (initial value)
MX4	PDP-433CMX / MXE
MD5	Module 50 inches
MD4	Module 43 inches
HD5	PDP-503HD
HD4	PDP-433HD

GS2: Output data of power down, temperature and dew drop information

- Output it according to transmission order and size of the table below.
- In the PD (Power Down) of RS-232C factory adjustment mode, NG except dew drop and AUDIO occurs and a command that except for 30 seconds to SD (shut down) is invalid.

Note: When NG occurred in the PD state, do not perform the "FAY" for 30 seconds to SD (Shut Down), and information acquisition is possible by perform the "GS2" directly.However it is necessary to set ID beforehand.

Order	Data Contents	Size	Remarks
1	AC information	1 byte	Always 0 (not used)
2	Service parts distinction	1 byte	0: DIGITAL ASSY adjustment completion 1: DIGITAL ASSY does not adjust (Service Assy)
3	Hour meter (hour, minute)	7 byte	*****H**M
4	Power down information	2 byte	1st/2nd (Note)
5	Temperature information	3 byte	8 bit
6	Dew drop information	1 byte	1: Dew drop NG
7	Panel microcomputer communication	1 byte	1: Communication NG
8	DIGITAL EEPROM communication	1 byte	1: Communication NG
9	DIGITAL EXPANDER communication	1 byte	1: Communication NG
10	Temperature information (TEMP2)	3 byte	8 bit
11	Temperature information (TEMP3)	3 byte	8 bit
12	Module microcomputer communication	1 byte	1: Communication NG
13	Wide microcomputer communication	1 byte	1: Communication NG
14	MAIN IIC	1 byte	1: Communication NG
15	MAIN EEPROM IIC	1 byte	1: Communication NG
16	AUDIO NG	1 byte	1: AUDIO NG
17	FAN NG	1 byte	1: FAN NG

(Note) Refer to the following table about contents of PD information

Data	Power Down Point
0	Nothing
1	Y-DRIVE
2	Y-DC/DC CONVERTER
3	X-DC/DC CONVERTER
4	X-DRIVE
5	Power supply
6	ADDRESS junction
7	ADDRESS resonance
8	DC/DC CONVERTER (DIGITAL)

GAS (Get Adjust Slot): Output data to be related to picture quality setting

- Transmit data according to transmission order and size of the table below.
- Data are SLOT sections of the factory menu.
- When current input function is except for VIDEO input of SLOT system, command is invalid.
- When SLOT is not connected or external SLOT is connected, command is invalid.
- Command is invalid except RS-232C factory adjustment mode.

Order	Data Contents		Size	Remarks
1	Y-DELAY	(Reference data)	3 byte	
2		(Offset data)	3 byte	(Note 1)
3	Y-OUT LEVEL	(Reference data)	3 byte	
4		(Offset data)	3 byte	(Note 1)
5	CD TINT	(Reference data)	3 byte	
6		(Offset data)	3 byte	(Note 1)
7	CDR OFFSET	(Reference data)	3 byte	
8		(Offset data)	3 byte	(Note 1)
9	CDB OFFSET	(Reference data)	3 byte	
10		(Offset data)	3 byte	(Note 1)
11	R-Y LEVEL	(Reference data)	3 byte	
12		(Offset data)	3 byte	(Note 1)
13	B-Y LEVEL	(Reference data)	3 byte	
14		(Offset data)	3 byte	(Note 1)

(Note 1) : When performed in reference mode selection, offset data outputs the same value as the reference data.

GAR: Output data to be related to picture quality (RGB1 of the factory menu)

• Transmit data according to transmission order and size of the table below.
• Command is invalid except RS-232C factory adjustment mode.

Order	Data Contents		Size	Remarks
1	AD MAIN CONT	(Reference data)	3 byte	(Note 1)
2		(Offset data)	3 byte	(Note 1) (Note 2)
3	AD R HIGH	(Reference data)	3 byte	(Note 1)
4		(Offset data)	3 byte	(Note 1) (Note 2)
5	AD G HIGH	(Reference data)	3 byte	(Note 1)
6		(Offset data)	3 byte	(Note 1) (Note 2)
7	AD B HIGH	(Reference data)	3 byte	(Note 1)
8		(Offset data)	3 byte	(Note 1) (Note 2)
9	AD R LOW	(Reference data)	3 byte	(Note 1)
10		(Offset data)	3 byte	(Note 1) (Note 2)
11	AD G LOW	(Reference data)	3 byte	(Note 1)
12		(Offset data)	3 byte	(Note 1) (Note 2)
13	AD B LOW	(Reference data)	3 byte	(Note 1)
14		(Offset data)	3 byte	(Note 1) (Note 2)
15	MAT CONT	(Reference data)	3 byte	(Note 1)
16		(Offset data)	3 byte	(Note 1) (Note 2)
17	MAT BRIGHT	(Reference data)	3 byte	(Note 1)
18		(Offset data)	3 byte	(Note 1) (Note 2)
19	MAT COLOR	(Reference data)	3 byte	(Note 1)
20		(Offset data)	3 byte	(Note 1) (Note 2)
21	MAT TINT	(Reference data)	3 byte	(Note 1)
22		(Offset data)	3 byte	(Note 1) (Note 2)

(Note 1) Setting data to be unrelated to current input function / input signal / setting output dummy data.
(Note 2) When performed in reference mode selection, offset data outputs the same value as the reference data.

GPS: Output data to be related to SCREEN adjustment data

• Transmit data according to transmission order and size of the table below.
• All the data are data of an integrator area.
• Except normal operation mode / each mode of RS-232C integrator adjustment, command is invalid.

Order	Data Contents	Size	Remarks
1	H.POSITION	3 byte	
2	V.POSITION	3 byte	
3	CLOCK	3 byte	(Note 1)
4	PHASE	3 byte	(Note 1)
5	V.SIZE	3 byte	

(Note 1) When current input signal mode is the VIDEO system and INPUT5 (DVI), adjustment data output dummy data (*).

GPD (Get Power Down), PD (Power Down) : Outputs information
(contents of PD INFORMATION of service factory MENU)

• Output the acquired data according to the transmission order and size of the table below.
• Except RS-232C factory adjustment mode and PD state, command is invalid.
(Note) Do not perform the "FAY" in the PD state, and information acquisition is possible by perform the "GPD" directly. However it is necessary to set ID beforehand.

Order	Data Contents	Size	Remarks
1	The latest 1stPD information	1 byte	(Note 1)
2	The latest 2ndPD information	1 byte	(Note 1)
3	Hour meter information of the latest PD	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
4	1stPD information before twice	1 byte	(Note 1)
5	2ndPD information before twice	1 byte	(Note 1)
6	Hour meter information of PD before twice	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
7	1stPD information before three times	1 byte	(Note 1)
8	2ndPD information before three times	1 byte	(Note 1)
9	Hour meter information of PD before three times	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
10	1stPD information before four times	1 byte	(Note 1)
11	2ndPD information before four times	1 byte	(Note 1)
12	Hour meter information of PD before four times	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
13	1stPD information before five times	1 byte	(Note 1)
14	2ndPD information before five times	1 byte	(Note 1)
15	Hour meter information of PD before five times	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
16	1stPD information before six times	1 byte	(Note 1)
17	2ndPD information before six times	1 byte	(Note 1)
18	Hour meter information of PD before six times	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
19	1stPD information before seven times	1 byte	(Note 1)
20	2ndPD information before seven times	1 byte	(Note 1)
21	Hour meter information of PD before seven times	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE
22	1stPD information before eight times	1 byte	(Note 1)
23	2ndPD information before eight times	1 byte	(Note 1)
24	Hour meter information of PD before eight times	7 byte	Previous 5byte: HOUR Back 2byte: MINUTE

(Note 1) Refer to the following table about contents of PD information

Data	Power Down Point
0	Nothing
1	Y-DRIVE
2	Y-DC/DC CONVERTER
3	X-DC/DC CONVERTER
4	X-DRIVE
5	Power supply
6	ADDRESS junction
7	ADDRESS resonance
8	DC/DC CONVERTER (DIGITAL)

GWB (Get White Balance): Output data to be related to picture quality / white balance

- Transmit data according to transmission order and size of the table below.
- Except each normal operation mode / RS-232C integrator adjustment / RS-232C factory adjustment mode, command is invalid.
- In the normal operation / RS-232C integrator adjustment mode, output two data of the current signal mode in the current input function and integrator area of current color mode.
- In the RS-232C factory adjustment mode, output data of factory RGB2.

Order	Data Contents	Size	Remarks
1	CONTRAST	3 byte	
2		3 byte	(Note 2)
3	BRIGHT	3 byte	
4		3 byte	(Note 2)
5	COLOR	3 byte	(Note 1)
6		3 byte	(Note 2)
7	TINT	3 byte	(Note 1)
8		3 byte	(Note 2)
9	R HIGH	3 byte	
10		3 byte	(Note 2)
11	G HIGH	3 byte	
12		3 byte	(Note 2)
13	B HIGH	3 byte	
14		3 byte	(Note 2)
15	R LOW	3 byte	
16		3 byte	(Note 2)
17	G LOW	3 byte	
18		3 byte	(Note 2)
19	B LOW	3 byte	
20		3 byte	(Note 2)
21	H.ENHANCE (H.SHARP)	3 byte	
22	V.ENHANCE (V.SHARP)	3 byte	

(Note 1) Setting data to be unrelated to current input function / input signal / setting output dummy data (*).
(Note 2) When performed in reference mode selection, offset data outputs the same value as the reference data.

GSS: Output data to be related to various established state
(SET UP item of menu mode / integrator menu)

• Transmit data according to transmission order and size of the table below.
• Except each normal operation mode / RS-232C integrator adjustment / RS-232C factory adjustment mode, command is invalid.

Order	Data Contents	Size	Output	Remarks
1	COLOR TEMP	1 byte	1: COLOR TEMP1 2: COLOR TEMP2 3: COLOR TEMP3 4: COLOR TEMP4 5: COLOR TEMP5	(Note 1)
2	DIGITAL NR	1 byte	0: OFF 1: LOW 2: MIDDLE 3: HIGH	(Note 1)
3	HIGH CONTRAST	1 byte	0: OFF, 1: ON	
4	PURECINEMA	3 byte	Same as the RS-232C command	(Note 1)
5	COLOR SYSTEM	3 byte	Same as the RS-232C command	(Note 1)
6	CLAMP	1 byte	1: AUTO 2: LOCKED	(Note 1)
7	3DY/C	1 byte	M: MOTION S: STILL	(Note 1)
8	SETTING/VIDEO SIGNAL	3 byte	Same as the RS-232C command	(Note 1)
9	2X2MODE	1 byte	0: OFF 1 to 4: MG1 to MG4 (Refer to item MAGNIFY)	
10	BRIGHT ENHANCE	1 byte	0: OFF, 1: ON	
11	HDTV MODE	3 byte	Same as the RS-232C command	(Note 1)
12	VIDEO INPUT	1 byte	1: COMPONENT1 2: COMPONENT2	(Note 1)
13	Input function	3 byte	IN*	
14	Screen size	1 byte	0: DOT BY DOT 1: 4:3 (TYPE) 2: FULL (TYPE) 3: ZOOM 5: WIDE 6: 100% display	
15	SUB VOLUME (INPUT1)	2 byte	0 to 60	
16	SUB VOLUME (INPUT2)	2 byte	0 to 60	
17	SUB VOLUME (INPUT3)	2 byte	0 to 60	(Note 1)
18	SUB VOLUME (INPUT4)	2 byte	0 to 60	(Note 1)
19	SUB VOLUME (INPUT5)	2 byte	0 to 60	(Note 1)

(Note 1) Setting data to be unrelated to current input function / input signal / setting output dummy data (*).

GSO: Output data to be related to various established state (OPTION item of menu mode / integrator menu)

• Transmit data according to transmission order and size of the table below.
• Except each normal operation mode / RS-232C integrator adjustment / RS-232C factory adjustment mode, command is invalid.

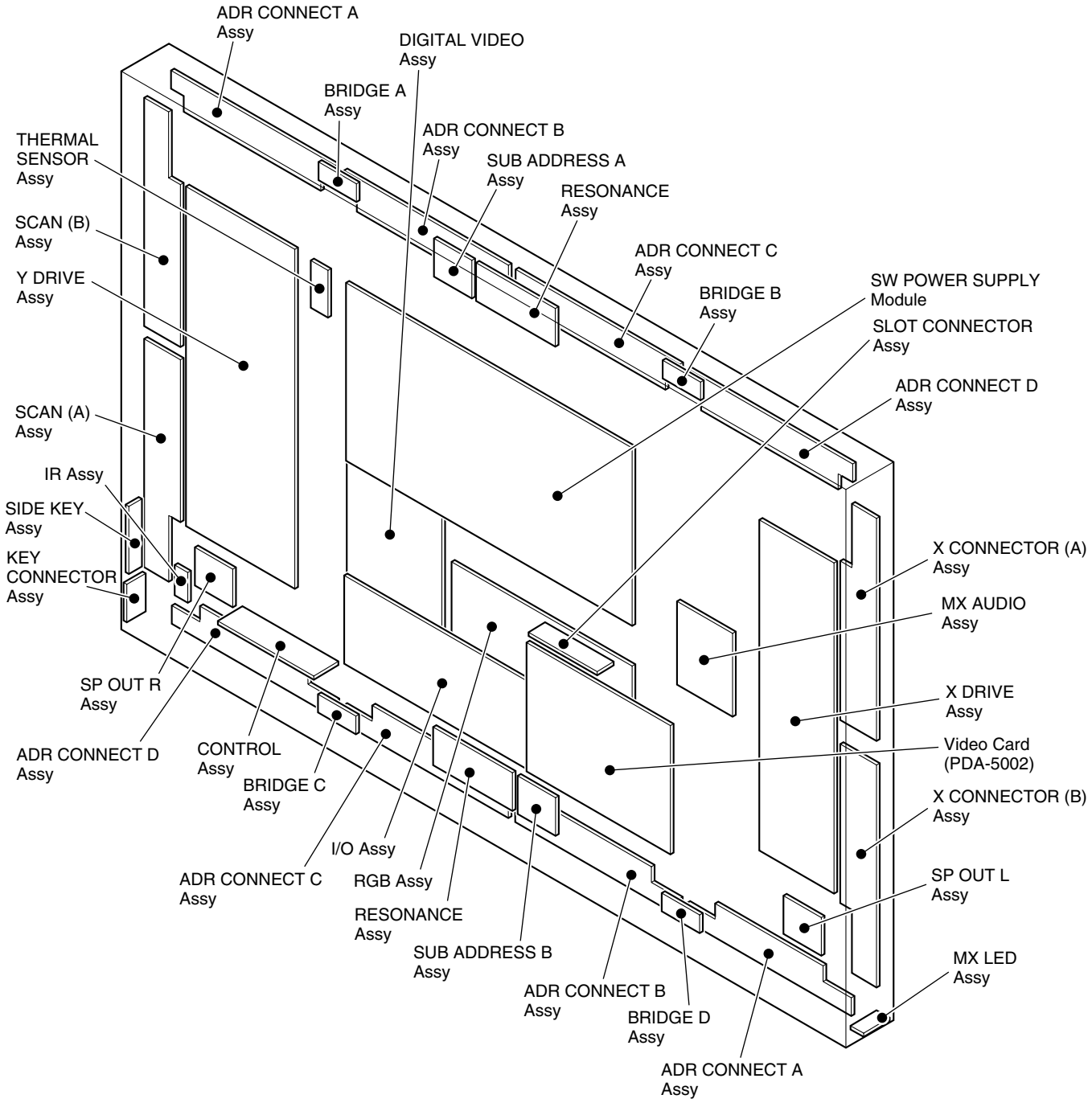
Order	Data Contents	Size	Output	Remarks
1	POWER CONTROL	3 byte	Same as the RS-232C command	
2	OSD display	1 byte	0: OSD display prohibition 1: OSD display permission	
3	FULL MASK	3 byte		Display a RS-232C command of set MASK currently
4	R SIDE MASK LEVEL	3 byte	Adjustment value	
5	G SIDE MASK LEVEL	3 byte	Adjustment value	
6	B SIDE MASK LEVEL	3 byte	Adjustment value	
7	MASK CONTROL	1 byte	0: OFF, 1: ON	
8	ORBITER MODE	1 byte	0: OFF, 1: ON	
9	INVERSE MODE	1 byte	0: OFF, 1: ON	
10	COLOR MODE	1 byte	1: COLOR MODE1 2: COLOR MODE2	
11	MIRROR MODE	1 byte	X: Right and left inverting Y: Top and bottom inverting Z: Top and bottom right and left inverting N: OFF	
12	FAN CONTROL	1 byte	A: AUTO M: MAX	
13	MONITOR NAME	12 byte		
14	SLOT INPUT	1 byte	0: VIDEO (RGB) 1: COMPONENT1 2: COMPONENT2	(Note 1)
15	TEMPERATURE	3 byte	A/D input value	TEMP3
16	HOUR METER	5 byte		Unit : H
17	KEY LOCK	1 byte	0: Lock release 1: Lock	

(Note 1) Output dummy data (*) in inside SLOT connection.

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 PCB LOCATION



● Rear View

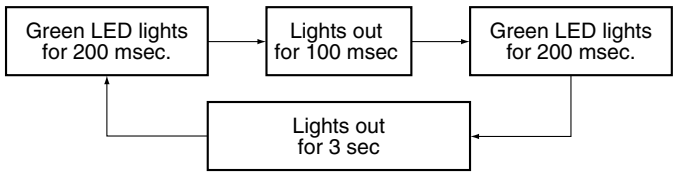
7.1.2 SHUT DOWN/POWER DOWN DIAGNOSIS BY LED DISPLAY

When internal circuit abnormality and other operation abnormality occurred from this unit, self-diagnose display function by STANDBY/ON (LED) indicator is loaded.
Each NG point by LED blinking and a PD (power down) point are as follows.

● Shut Down

• Operations : When a microcomputer detected abnormality, turn the power supply to OFF.
• LED display : Green blinks

Examples: LED blinks in the DIGITAL-IIC communication NG



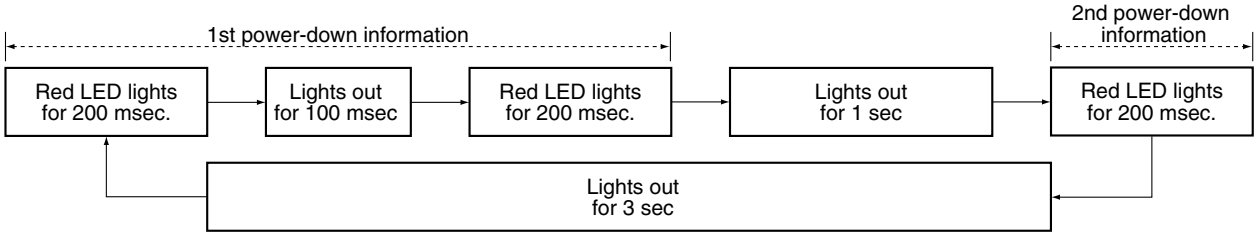
Number of blinks	Name
1	Panel Microcomputer NG
2	DIGITAL-IIC communication NG
3	Dewdrop abnormality
4	Temperature abnormality
5	FAN abnormality
6	Module microcomputer NG
7	Wide microcomputerNG
8	RGB-IIC communication NG
9	Audio NG

How to release the shut down state
When turn the power supply ON by remote control units, release from the shut down state, and turn the power supply ON.
(It is not necessary to turn the AC power OFF.)

● Power Down

• Operations : When this unit becomes the dangerous state, turn the power supply OFF with the protection circuit.
• LED display : Red blinks
* When protection circuit more than two places almost worked simultaneously, display LED in order to 1st - 2nd.

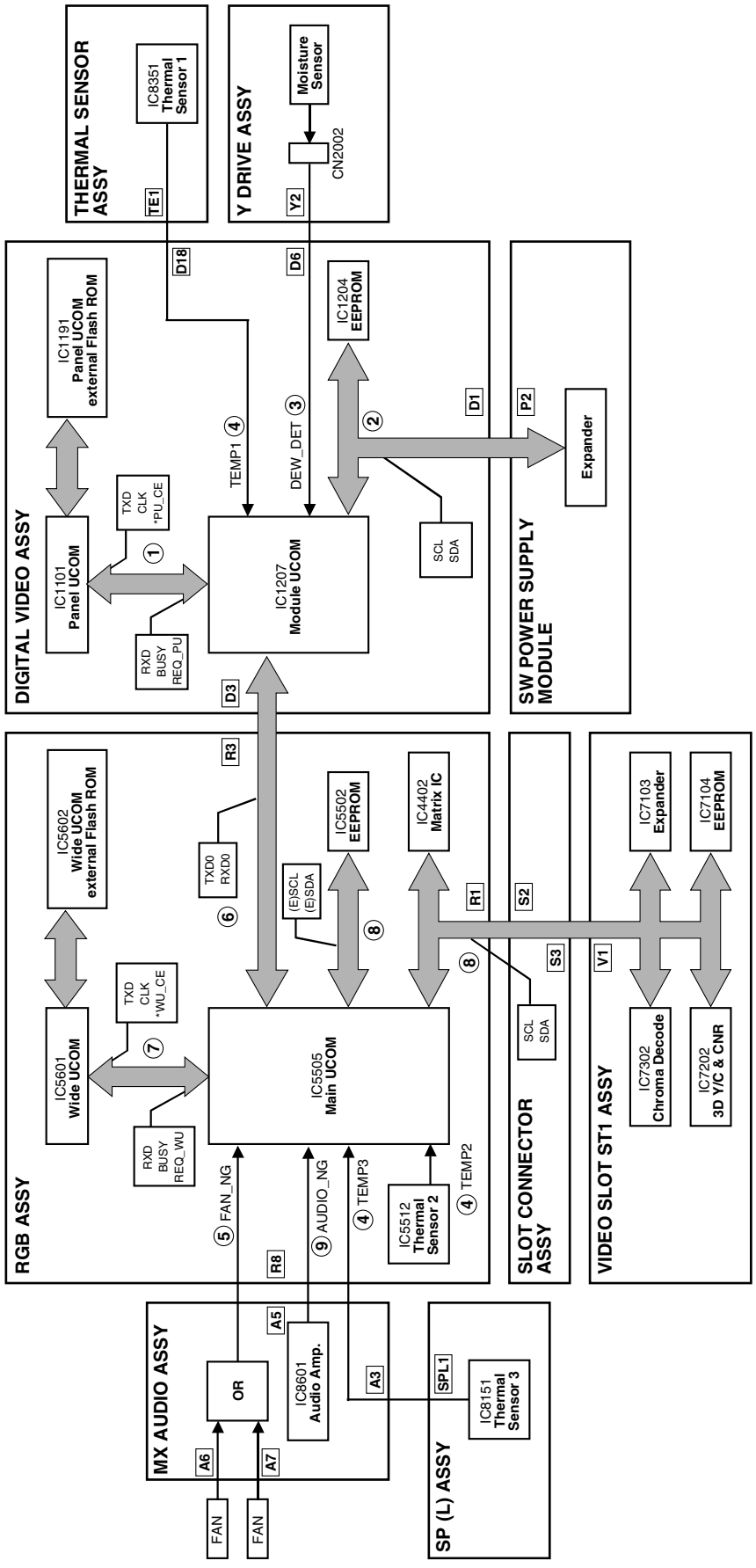
Examples: LED blinks in the 1st power down = Y-DC/DC CONVERTER, 2nd power down = Y-DRIVE


1st power-down information
2nd power-down information
Red LED lights for 200 msec.
Lights out for 100 msec
Red LED lights for 200 msec.
Lights out for 1 sec
Red LED lights for 200 msec.
Lights out for 3 sec

Number of blinks	Name
1	Y-DRIVE
2	Y-DC/DC CONVERTER
3	X-DC/DC CONVERTER
4	X-DRIVE
5	Power supply
6	Address junction
7	Address resonance
8	DIGITAL-DC/DC CONVERTER

How to release the power down state
AC power OFF
↓
Wait for PD LED in the power supply module disappearing (for around 30 seconds).
↓
Afterwards, wait moreover for five seconds.
↓
Return by AC power ON.
* After power down release, this unit rises up in the standby state.

● **Block Diagram of Shut Down Signal System**



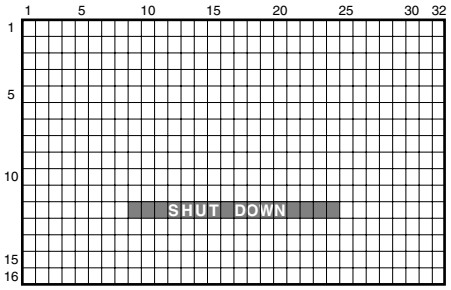
Note: ① - ⑧ show LED flashing number of times when shut down occurred in this route.

● Shut down diagnosis

① Panel microcomputer NG

When a module microcomputer failed in communication with a panel microcomputer, this NG occurs.
Shut down after OSD display for 30 seconds from the NG detection.

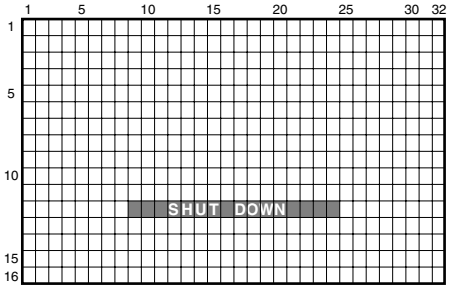
Abnormality to expect
Open / Short of communication line in the Assy



② DIGITAL-IIC communication NG

When a module microcomputer failed in communication with outside EEPROM or EXPANDER, this NG occurs.
Shut down after OSD display for 30 seconds from the NG detection.
* However, this communication NG may occur in the standby state.

Abnormality to expect
- Open / Short of communication line in the Assy
- Breaking of wire between DIGITAL VIDEO Assy (D1) and SW POWER SUPPLY Module (P2).



③ Dew drop detection

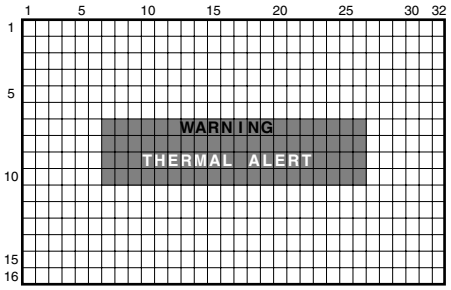
When it becomes the dew drop state in this unit, this NG occurs.
After the dew drop detection, shut down immediately.

Abnormality to expect for dew drop
Disconnect a connector CN2002 between Dew drop sensor and Y DRIVE Assy.

④ Temperature abnormality

When temperature of this unit became abnormally high, this NG occurs.
Shut down after OSD display from the NG detection for 30 seconds.

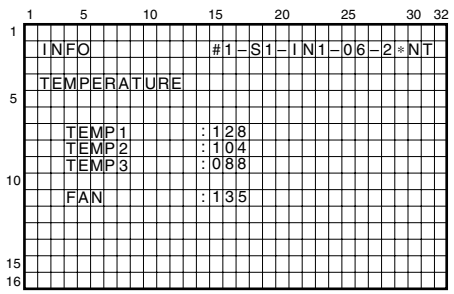
Abnormality to expect when it occurs in the environment that is not high-temperature
- Disconnect a connector between SP TERMINAL (L) Assy (SPL1) and MX AUDIO Assy (A3).
- Disconnect a connector between MX AUDIO Assy (A5) and RGB Assy (R8).
- Disconnect a connector between DIGITAL VIDEO Assy (D18) and temperature sensor 1 (TE1).



Reference

Shut down temperature of each temperature sensor
TEMP2 data ≧ 150 (≒ 80°C)
TEMP3 data ≧ 117 (≒ 64°C)
* TEMP1 is not shut down by temperature, and it shuts down when connector was disconnected.

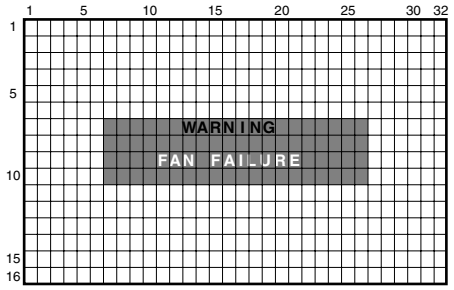
Temperature display by "INFORMATION" of the factory menu
TEMP1 (°C) ≒ TEMP1 (data) -50
TEMP2 (°C) ≒ TEMP2 (data) /2+5
TEMP3 (°C) ≒ TEMP3 (data) /2+5



⑤ FAN NG

When a fan does not function, this NG occurs.
Shut down after OSD display for 30 seconds from the NG detection.

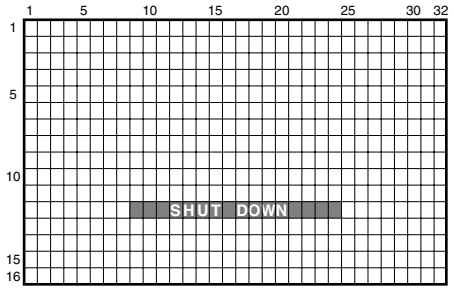
* FAN NG detection functions only in case of following.
• When FAN CONTROL setting is maximum
• When sensor temperature of TEMP3 is more than 30°C with FAN CONTROL setting is AUTO.
(even if connector is left when does not turn the FAN, this unit does not work.)



Abnormality to expect
• Disconnect a junction connector between FAN (A6) and MX AUDIO Assy (A7).
• Disconnect a connector between MX AUDIO Assy (A5) and RGB Assy (R8).
• FAN forced stop by an alien substance involving it.

⑥ Module microcomputer NG

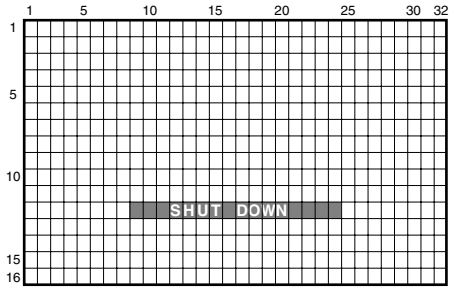
When a main microcomputer failed in communication with a module microcomputer, this NG occurs.
Shut down after OSD display for 30 seconds from the NG detection.
* However, this communication NG may occur by the standby state.



Abnormality to expect
• Open / Short of communication line in the Assy.
• Disconnect a connector between RGB Assy (R3) and DIGITAL VIDEO Assy (D3).
• Writing defectiveness of module microcomputer (IC1207) software.

⑦ Wide microcomputer NG

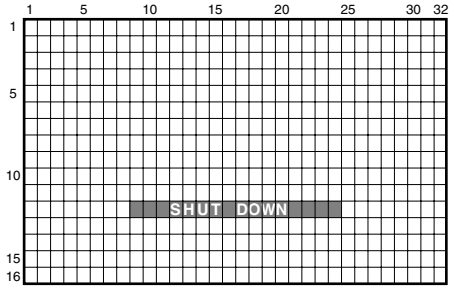
When a main microcomputer failed in communication with a wide microcomputer, this NG occurs.
Shut down after OSD display for 30 seconds from the NG detection.



Abnormality to expect
• Open / Short of communication line in the Assy.
• Software writing defectiveness of wide microcomputer (IC5601).
• Writing defectiveness of outside Flash ROM (IC5602) on the wide microcomputer.

⑧ RGB-IIC communication NG

When a main microcomputer failed in IIC communication, this NG occurs.
Shut down after OSD display for 30 seconds from the NG detection.
* However, this communication NG may occur by the standby state.



Abnormality to expect
• Open / Short of communication line in the Assy.
• SLOT and the insertion of the SLOT junction PC Board are incomplete.

Notes: There is the case that it becomes the following symptom except NG when the SLOT insertion is incomplete.

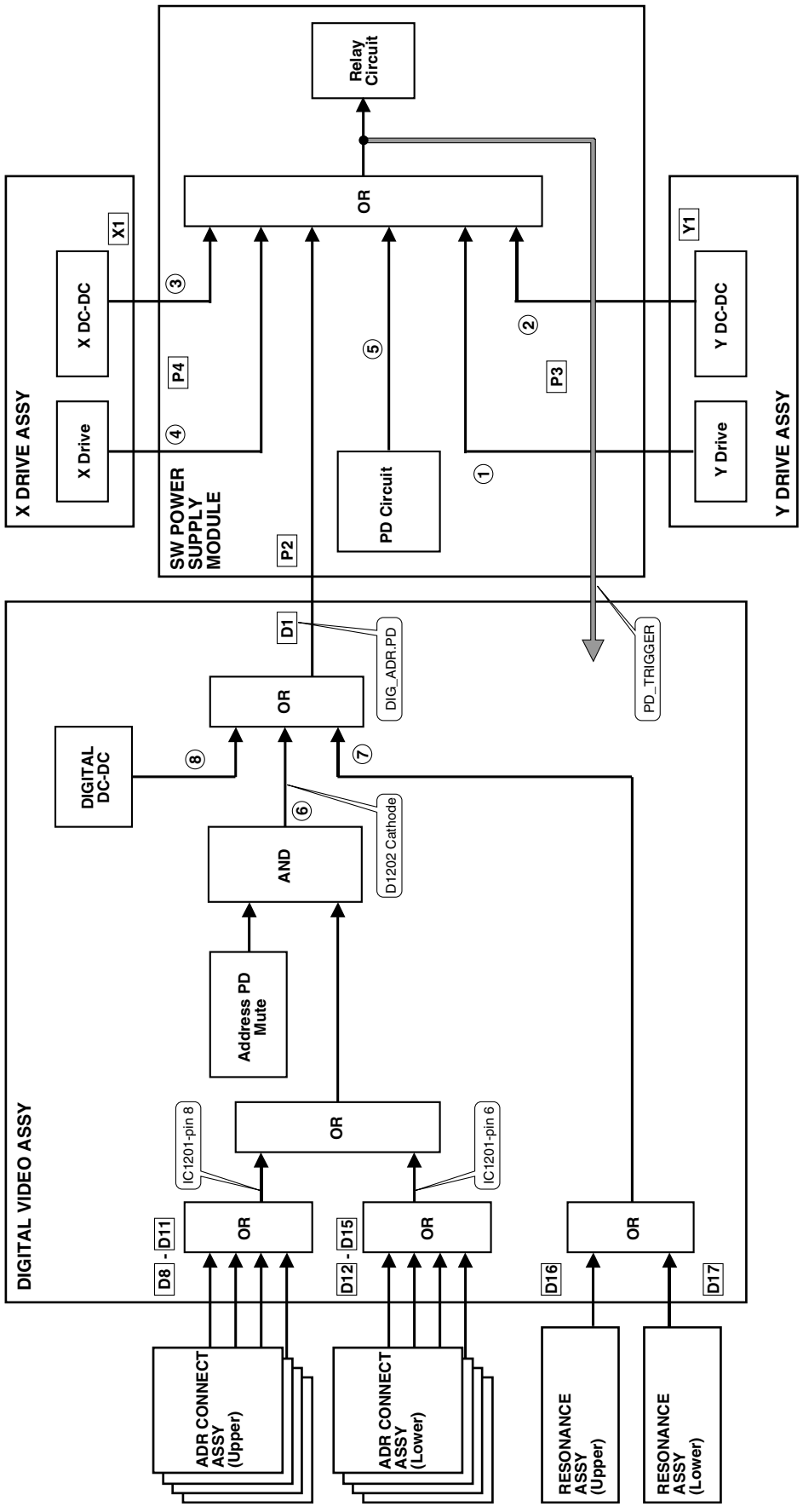
• Audio of INPUT3 and 4 are not output. • Do not switch from INPUT3 to 5 (SLOT function). • Video signal of INPUT1 and 2 are not appear.

⑨ Audio NG

When DC component added on the speaker output line, this NG occurs.
After the NG detection, shut down immediately.

Abnormality to expect
• Disconnect a connector between MX AUDIO Assy (A5) and RGB Assy (R8).
• Short-circuits between + and - of C8615 and C8622.

● **Block Diagram of Power Down Signal System**



Note: ① - ⑧ show LED flashing number of times when power down occurred in this route.

● **Kind and function of the various protection circuit (P.D. circuit)**

Assy Name	OSD Display	Red LED Number of Blinks	Kind of P.D. Circuit	Function	Remarks
Y DRIVE Assy	Y-DRV	1	VCP OCP	P.D. by VCP overcurrent	
	Y-DDC	2	VOFS OVP	P.D. by VOFS overvoltage	
			VOFS UVP	P.D. by VOFS undervoltage (= overcurrent)	
			VH OVP	P.D. by VH overvoltage	
			VH UVP	P.D. by VH undervoltage (= overcurrent)	
			IC5V UVP	P.D. by IC5V undervoltage (= overcurrent)	
X DRIVE Assy	X-DDC	3	VRN OVP	P.D. by VRN overvoltage	
			VRN UVP	P.D. by VRN undervoltage (= overcurrent)	
	X-DRV	4	VCP OCP	P.D. by VCP overcurrent	
			RESET OCP	P.D. by reset circuit overcurrent	
SW POWER SUPPLY Module	POWER	5	VSUS OVP	P.D. by VSUS overvoltage	
			VSUS UVP	P.D. by VSUS undervoltage (= overcurrent)	
			VADR OVP	P.D. by VADR overvoltage	
			VADR UVP	P.D. by VADR undervoltage (= overcurrent)	
			15V OVP	P.D. by 15V overvoltage	
			15V UVP	P.D. by 15V undervoltage (= overcurrent)	
			12V UVP	P.D. by 12V undervoltage (= overcurrent)	
			6.5V OVP	P.D. by 6.5V overvoltage	
			6.5V UVP	P.D. by 6.5V undervoltage (= overcurrent)	
			13.5V UVP	P.D. by 13.5V undervoltage (= overcurrent)	
			-9V UVP	P.D. by -9V undervoltage (= overcurrent)	
			+B OVP	P.D. by +B overvoltage	
			+B OCP	P.D. by +B overcurrent	
			AC200V P.D.	P.D. by AC200V apply	Note 1
				PFC module overheat protection	
				VSUS arc resistance overheat protection	
ADR CONNECT Assy	ADRES	6	ADR.PD	P.D. by disconnecting the connector	
RESONANCE Assy	ADR-K	7	ADR.K.PD	P.D. by ICP open and TCP defective	
DIGITAL VIDEO Assy	DC-DC	8	5.0V OVP	P.D. by 5V overvoltage	
			5.0V UVP	P.D. by 5V undervoltage (= overcurrent)	
			3.3V OVP	P.D. by 3.3V overvoltage	
			3.3V UVP	P.D. by 3.3V undervoltage (= overcurrent)	
			2.5V OVP	P.D. by 2.5V overvoltage	
			2.5V UVP	P.D. by 2.5V undervoltage (= overcurrent)	

Reference
OVP : **O**ver **V**oltage **P**rotect
UVP : **U**nder **V**oltage **P**rotect
OCP : **O**ver **C**urrent **P**rotect

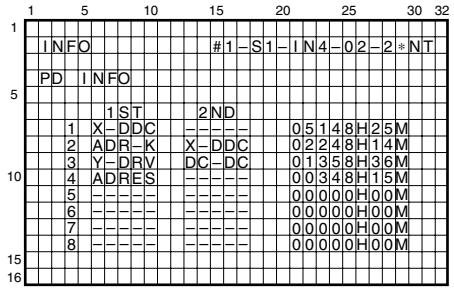
Note 1: AC200V P.D. is not applicable to the PDP-433MXE model.

● Diagnosis Method in Power Down

1st/2nd/time stamp are stored eight times of power down in the past.

① OSD display of PD history

Display with "INFORMATION" of the factory menu.



Display of PD point

Power Down Point	OSD Display
Y-DRIVE	Y-DRV
Y-DC/DC CONVERTER	Y-DDC
X-DC/DC CONVERTER	X-DDC
X-DRIVE	X-DRV
Power supply	POWER
ADDRESS junction	ADRES
ADDRESS resonance	ADR-K
DC/DC CONVERTER (DIGITAL)	DC-DC

Time stamp display

[OOOOOH] : HOUR, [OOM] : MINUTE

Example)

Time stamp display is [65432H10M] → 65432 hours 10 minutes pass since the time of product shipment.

② PD history read in by RS-232C command "GPD"

Order	Data contents	Size
1	The latest 1st PD point	1 byte
2	The latest 2nd PD point	1 byte
3	The latest PD time stamp	7 byte
4	1st PD point before twice	1 byte
5	2nd PD point before twice	1 byte
6	PD time stamp before twice	7 byte
7	1st PD point before three times	1 byte
8	2nd PD point before three times	1 byte
9	PD time stamp before three times	7 byte
10	1st PD point before four times	1 byte
11	2nd PD point before four times	1 byte
12	PD time stamp before four times	7 byte
13	1st PD point before five times	1 byte
14	2nd PD point before five times	1 byte
15	PD time stamp before five times	7 byte
16	1st PD point before six times	1 byte
17	2nd PD point before six times	1 byte
18	PD time stamp before six times	7 byte
19	1st PD point before seven times	1 byte
20	2nd PD point before seven times	1 byte
21	PD time stamp before seven times	7 byte
22	1st PD point before eight times	1 byte
23	2nd PD point before eight times	1 byte
24	PD time stamp before eight times	7 byte

Data of PD point

Power Down Point	"GPD" Data
Y-DRIVE	1
Y-DC/DC CONVERTER	2
X-DC/DC CONVERTER	3
X-DRIVE	4
Power supply	5
ADDRESS junction	6
ADDRESS resonance	7
DC/DC CONVERTER (DIGITAL)	8

Time stamp data

before 5 byte: HOUR, after 2 byte: MINUTE

Example)

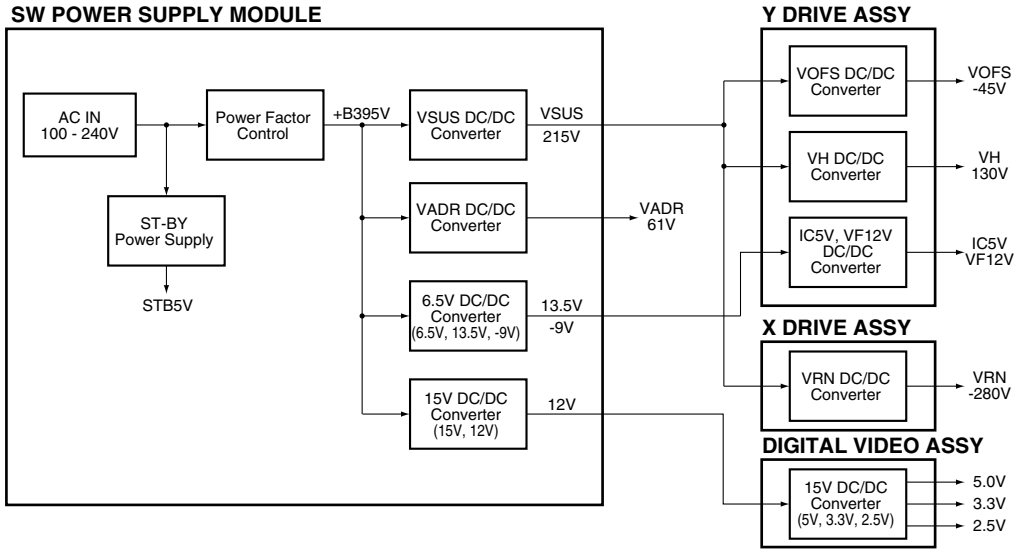
Time stamp is [6543210] → 65432 hours 10 minutes pass since the time of product shipment.

● Diagnosis of the error point in the various protection circuit (P.D. circuit) operation (Red LED blinks)

Number of Blinks	P.D. Point in Operation	Error Pont	Possible Part of Error	Circuit State	Operation P.D. Circuit	Diagnosis Condition
1	Y DRIVE	Y DRIVE Assy	IC2206, IC2214 (Pulse module), IC2203, IC2204, IC2212, IC2213, IC2213, IC2217, R2209	K2211 Lo	VCP OCP	
2	Y DC DC	VOFS D/D CONV. BLOCK (Y DRIVE Assy)	IC2702, IC2709, IC2715	K2712 Lo	VOFS OVP	
		VOFS D/D CONV. BLOCK (Y DRIVE Assy)	IC2701, IC2702, IC2709, IC2715	K2709 Lo	VOFS UVP	Drive section (control signal, output elements etc.) in normal operation
			Q2211, Q2212, R2277, IC2208, IC2210			VOFS D/D CONV. BLOCK in normal operation
		VH D/D CONV. BLOCK (Y DRIVE Assy)	IC2712, IC2716	K2719 Lo	VH OVP	
		VH D/D CONV. BLOCK (Y DRIVE Assy)	IC2711, IC2712, IC2716	K2718 Lo	VH UVP	Drive section (control signal, output elements etc.) in normal operation
		SCAN (A), (B) Assy	SCAN IC			VH D/D CONV. BLOCK in normal operation
		IC5V D/D CONV. BLOCK (Y DRIVE Assy)	IC2704, IC2706, IC2717			SCAN Assy in normal operation
		SCAN (A), (B) Assy	SCAN IC	K2713 Lo	IC5V UVP	IC5V D/D CONV. BLOCK in normal operation
		IC5V D/D CONV. BLOCK (Y DRIVE Assy)	IC2704, IC2706, IC2717			SCAN Assy in normal operation
3	X DC DC	VRN D/D CONV. BLOCK (X DRIVE Assy)	IC3702, IC3712	K3708 Lo	VRN OVP	
		VRN D/D CONV. BLOCK (X DRIVE Assy)	IC3701, IC3702, IC3712	K3705 Lo	VRN UVP	Drive section (control signal, output elements etc.) in normal operation
		X DRIVE Assy	Q3122			VRN D/D CONV. BLOCK in normal operation
4	X DRIVE	X DRIVE Assy	IC3200, IC3201 (pulse module), IC3103, IC3104, IC3106, IC3107, IC3110, IC3113, R3109	K3103 Lo	VCP OCP	
			Q3122	K3102 Lo	VRN OCP	
5	PS	X DRIVE Assy	IC3200, IC3201 (Pulse module)			When P4 connector disconnected, P.D. does not occur
		Y DRIVE Assy	IC2206, IC2214 (Pulse module)			When P3 connector disconnected, P.D. does not occur
		MX AUDIO Assy	IC8601 (Audio IC)			When P6 connector disconnected, P.D. does not occur
		ADDRESS CONNECT A - D Assy, RESONANCE Assy, D/D CONV. BLOCK (DIGITAL VIDEO Assy)				When pin 5 of P2 connector disconnected, P.D. does not occur
		SW POWER SUPPLY Module	SW POWER SUPPLY Module			When the voltage is not output even if P4, P3 and P6 connectors disconnected
6	ADR	ADDRESS CONNECT A~D Assy	Disconnect D8 - D15 connectors		ADR. PD	
7	ADR K	RESONANCE Assy	TCP damage of IC6704 (ICP), disconnect D16 and D17 connectors, panel microcomputer is defective, outside Flash ROM of the panel microcomputer is defective.		ADR. K. PD	
8	DIGITAL DC DC	D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1901 Lo	5.0V OVP	
				K1902 Lo	5.0V UVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1903 Lo	3.3V OVP	
				K1904 Lo	3.3V UVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1905 Lo	2.5V OVP	
				K1906 Lo	2.5V UVP	

Note: About PS PD
The condition that Red LED blinks five times (power supply PD)
1 When the internal protection circuit of SW POWER SUPPLY Module worked
2 When a microcomputer was not able to identify the PD point
↓
Being careful because the protection circuit of SW POWER SUPPLY Module cannot conclude that worked.

● Block diagram for Power supply section



● Supplementary information

1. Power on/off switch for the large-signal system (SW102)

Function: Only the power for the small-signal system (15V, 12V, 6.5V, 13.5V, and -9V) is on, and the power for the large-signal system (VSUS, VADR) is off.

Usage: Use when only an operational check for the small-signal system is required.

Supplementary information:
When this switch is to be used, the wires of pin 5 (DIG, ADR, and PD) of the P2 connector of the power-supply module should be disconnected to prevent the PD circuit from operating. To turn the power of the large-signal system off without using this switch, operation from an external PC through RS-232C commands "DRF" is basically required. In this case, the above procedure is not required, as the PD circuit is muted by software.

Method of power supply ON in the large signal system OFF state with RS-232C command

① Confirm that this unit is the standby state.
② Transmit RS-232C command "DRF."
③ Turn the power supply ON by remote control unit, side key or command "PON."

* When turn the power supply OFF once, return to setting of large signal system ON.
When turn the power supply ON in the large signal system OFF, transmit "DRF" command each time.

2. 200V AC power-down switch (SW101)

Function: While 200V AC voltage is applied, operation of the PD circuit is turned on and off (ON when the switch is set to 100V AC, and OFF when the switch is set to 200V AC).

Setting: For the MXE model only, the switch is set to 200V, and for other models, it is set to 100V.

3. Temperature compensation of the VSUS voltage for the drive system

Function: Control the power supply voltage mentioned above according to temperature. (Temperature compensation works so that the voltage is lowered on the lower-temperature side, and is raised on the higher-temperature side.)

Purpose: To improve the yield by compensating the temperature characteristics of the panel.

Supplementary information:
For this model, temperature compensation is performed only for the VSUS voltage, and not for the VOFS voltage, and it is controlled by software.

4. When a fuse blows

- If a fuse blows, never turn the power on again only after replacing the fuse. (In most cases, the fuse itself did not have any problem. So as long as factors of overcurrent have not been removed, chances of destruction increase every time the power is turned on. In the worst case, about a dozen parts may be destroyed.)
- Principally, the whole power-supply module must be replaced.

5. Voltage adjustment of the panel drive

As this model employs the electronic VR system for the VSUS and VOFS voltages, and as the voltage-adjustment data are stored in the DIGITAL assembly, voltage adjustment of the panel drive is not necessary when the power-supply modules are changed. (For VADR, VH, and VRN, adjustments with semifixed VR controls are necessary.)

For this model, as the power-supply block has been developed and designed by an outside vendor, at the point you know which module is a cause of failure (through diagnosis described elsewhere in this manual), change the corresponding modules, and do not diagnose or repair the module.

Similarly, the switches and the semifixed VRs inside the power-supply module must not be adjusted without a special reason.

7.1.3 AUTOMATIC BACKUP OF DIGITAL VIDEO ASSY DATA

■ Description

Auto copies data of EEPROM (IC1204/2k bit) on the DIGITAL VIDEO Assy as data for backup in the Assy replacement to one part of EEPROM (IC5502/64k bit) of the RGB Assy (area A of figure below).
Therefore DIGITAL VIDEO Assy or main unit adjustment item in the RGB Assy replacement (data of EEPROM on DIGITAL VIDEO Assy) is succeeded to Assy after replacement.

Note : COLOR and TINT are main unit adjustment items, but does not automatic backup because there are data in area C (refer to figure below).

● Contents of EEPROM on the DIGITAL VIDEO Assy

- Adjustment value of PANEL White Barance
  - PANEL-R HIGH : Main unit adjustment item
  - PANEL-G HIGH : Main unit adjustment item
  - PANEL-B HIGH : Main unit adjustment item
  - PANEL-R LOW : Main unit adjustment item
  - PANEL-G LOW : Main unit adjustment item
  - PANEL-B LOW : Main unit adjustment item

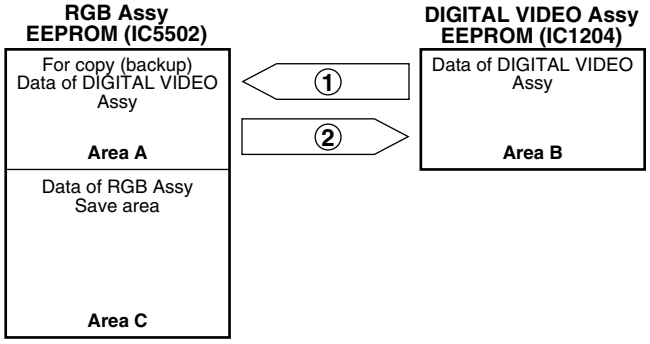
  } Perform automatic data backup
- Adjustment value of ABL
  - ABL LEVEL : Main unit adjustment item

  } Perform automatic data backup
- Adjustment value of drive system
  - X-SUS-B : Main unit adjustment item
  - X-SUS-G : Main unit adjustment item
  - Y-SUS-B : Main unit adjustment item
  - Y-SUS-G : Main unit adjustment item
  - V-SUS : Main unit adjustment item
  - V-OFFSET : Main unit adjustment item

  } Perform automatic data backup
- Pulse meter
- Hour meter
- Setting data of various FULL MASK

■ Flow of basic automatic backup

Use a key word, and judge each data (area A and B) whether it is the adjusted data or the not adjusted data, and perform the copy operation.

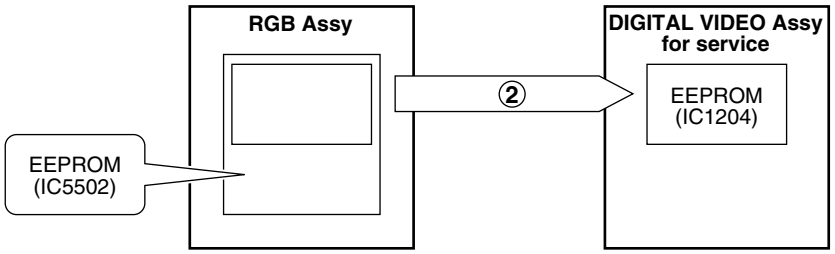


① Perform the copy whenever enter the service factory mode. (There is not relation in a key word.)
② In the power supply ON, confirm a key word, and perform the copy when a key word of DIGITAL VIDEO Assy (area B) does not adjust and a key word of RGB Assy is adjustment complete.

■ Actual automatic backup operation

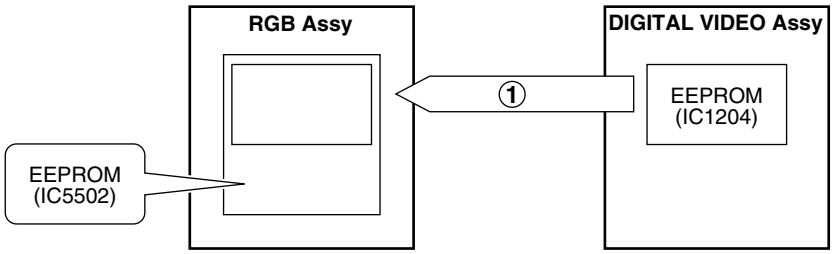
1. In the DIGITAL VIDEO Assy replacement (Use the service Assy)

Do not need modification of key words.
Replace DIGITAL VIDEO Assy with DIGITAL VIDEO Assy for service, and auto copies the backup data from EEPROM of RGB Assy to EEPROM of DIGITAL VIDEO Assy by turning the power on.



2. In the RGB Assy replacement (Do not need to be service Assy.)

Replace RGB Assy, and auto copy from EEPROM of DIGITAL VIDEO Assy to EEPROM of RGB Assy as for backup by enter the service factory mode.



3. In the DIGITAL VIDEO Assy replacement (Recycling of a repair part)... When install DIGITAL VIDEO Assy after repair to other sets.

Set a key word of DIGITAL VIDEO Assy to recycle in "Do not adjust".
Enter the service factory mode before removing the DIGITAL VIDEO Assy to recycle, and execute SERVICE PARTS of item INITIALIZE. (However, limit it when work as the main unit and OSD display is possible.)
Readjustment is necessary when cannot execute SERVICE PARTS.

Note: When does not change key word and repairs the DIGITAL VIDEO Assy and installed the DIGITAL VIDEO Assy after repair in another set 2, this function does not work in normal.
In addition, when have entered the service factory mode in the state mentioned above, copy data in the DIGITAL VIDEO Assy of set 1 before repair to area A in the RGB Assy of set 2 to install after repair.
Therefore necessary data have been performed overwrite with set 2.
Cannot replace the data which performed overwriting once.

4. In the DIGITAL VIDEO Assy replacement (Recycling of a repair part)... When install the DIGITAL VIDEO Assy after repair to the former set

Do not need modification of key words.
After repair the DIGITAL VIDEO Assy, work with the main unit adjustment value as before by installing it to the former set.
Perform the same operation as item 1 afterward.

5. When replace the DIGITAL VIDEO Assy and the RGB Assy to another Assy simultaneously

Normal copy with this function does not work. Readjustment is necessary.

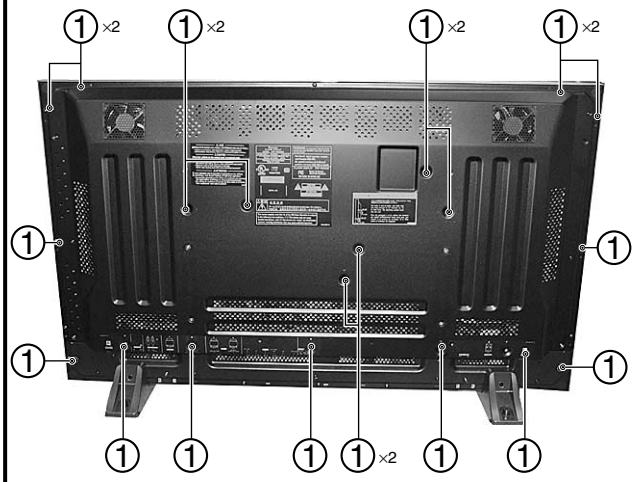
■ Others

1. COLOR and TINT are main unit adjustment items, but does not automatic backup because there are data in area C.
   About these two items
   ① When replaced only the DIGITAL VIDEO Assy
   Readjustment is unnecessary so that data is stored in the RGB Assy.
   ② When replaced the RGB Assy
   Readjustment is necessary after repair.
2. Data in EEPROM of the RGB Assy (area C) are Assy adjustment items except COLOR and TINT.
   Do not need a readjustment when replaced the Service Assy.

7.1.4 DISASSEMBLY

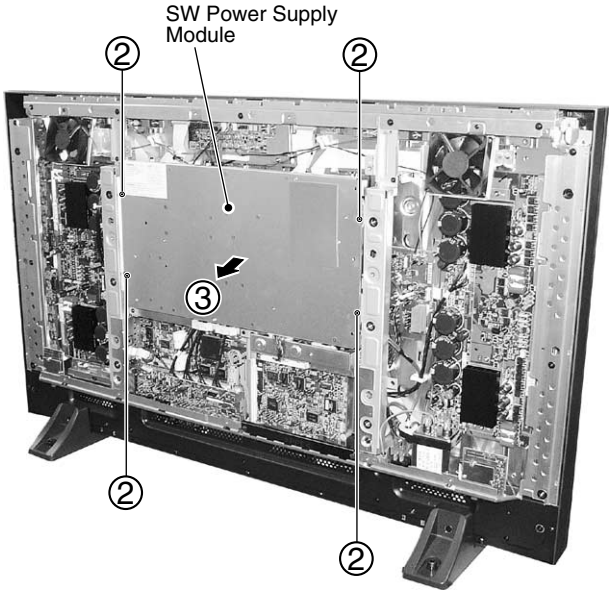
SW Power Supply Module

① Remove the Rear Case (M). (Screws × 20)

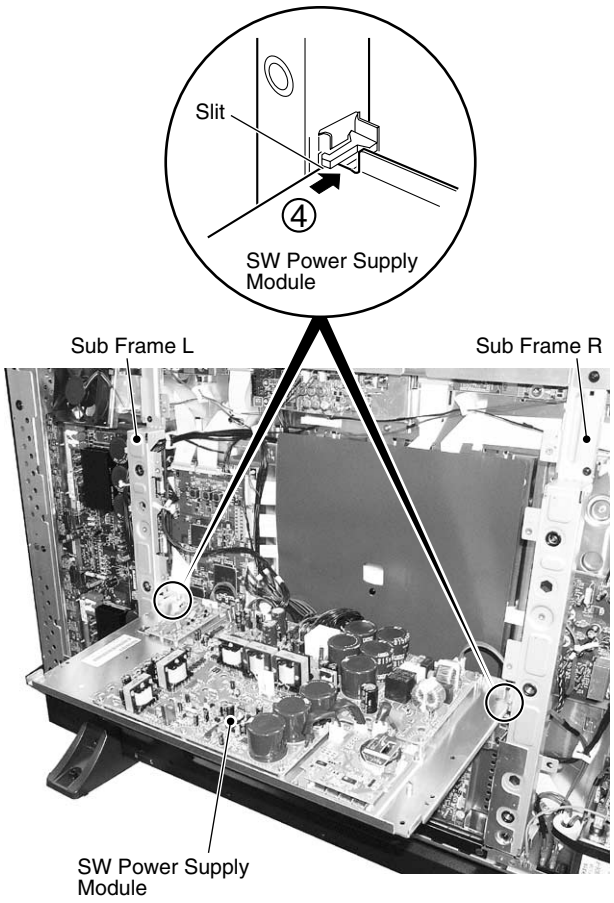


② Remove four screws.

③ Remove the SW Power Supply Module.



④ Insert the SW Power Supply Module into the slit of Sub Frame L and R.



Diagnosis

DIGITAL VIDEO Assy

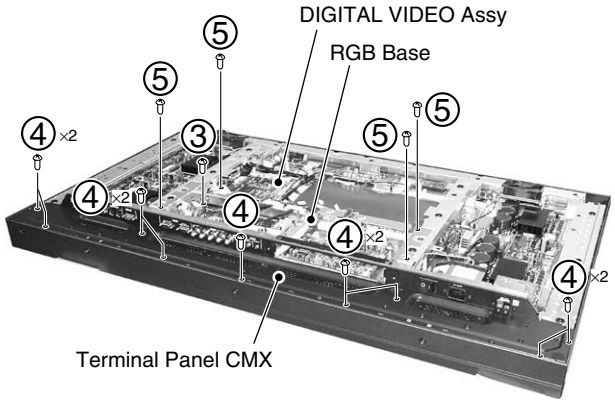
① Remove the Rear Case (M). (Screws × 20)

② Remove the SW Power Supply Module.
(Connector, Screws × 4)

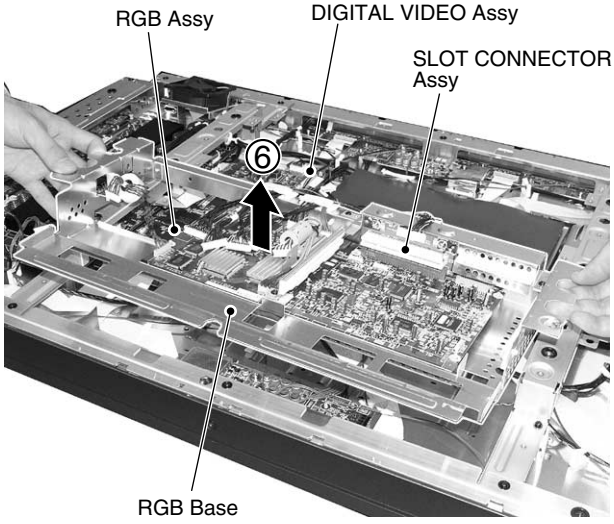
③ Remove a screw of earth block.

④ Remove the Terminal Panel CMX. (Connector, Screws × 9)

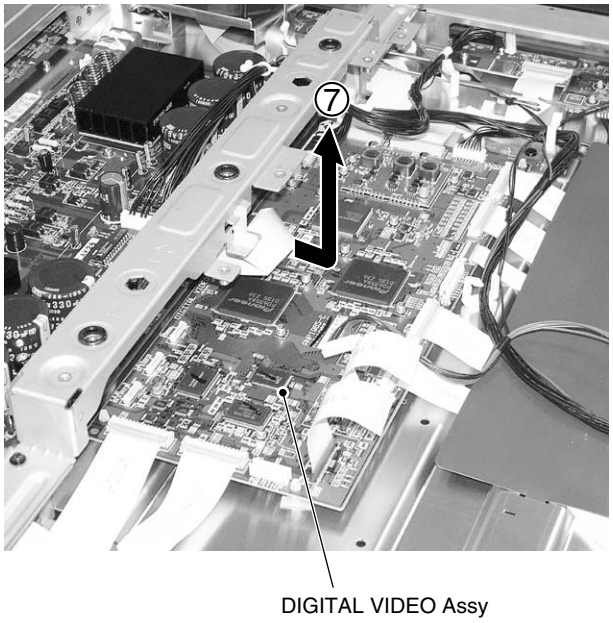
⑤ Remove the RGB Base. (Screws × 4)



⑥ Remove connectors and binders,
and remove the RGB Base with PCB Assys.

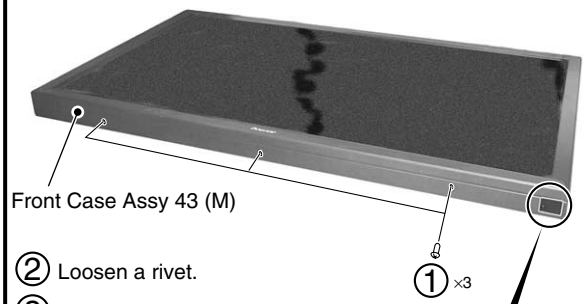


⑦ Remove the DIGITAL VIDEO Assy.
(Connector, Circuit Board Spacer × 6)



Y DRIVE, SCAN (A) and (B) Assemblies

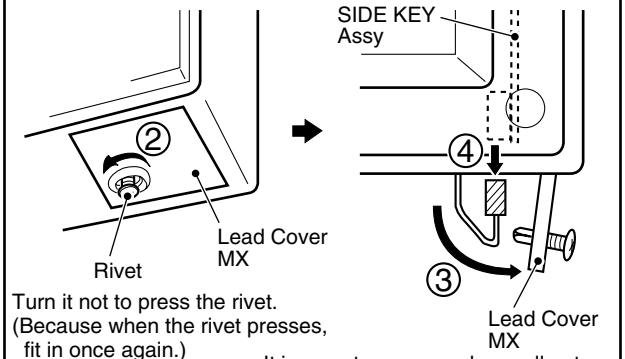
① Remove the three screws.



② Loosen a rivet.

③ Remove the Lead Cover MX.

④ Pull out a Flexible Cable.

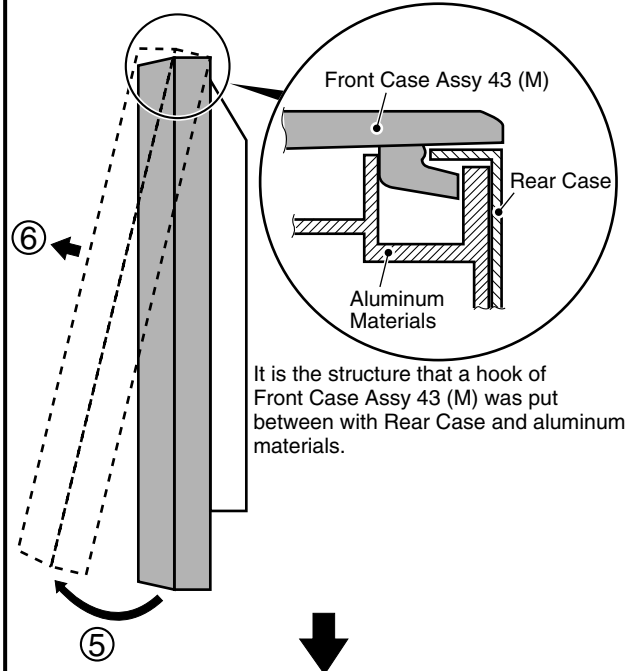


Turn it not to press the rivet.
(Because when the rivet presses, fit in once again.)

It is easy to remove when pull out the Lead Cover MX with the rivet before completely removing the rivet.

⑤ Remove bottom by the fulcrum at the top of Front Case Assy 43 (M).

⑥ Remove the Front Case Assy 43 (M).



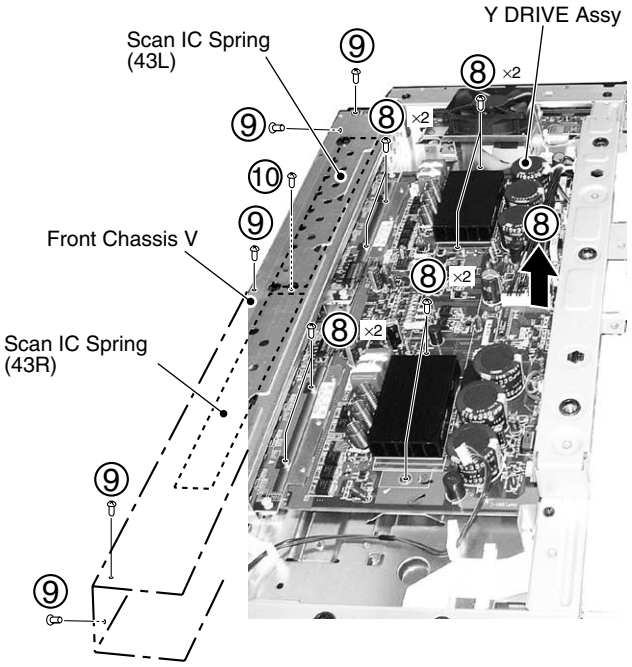
It is the structure that a hook of Front Case Assy 43 (M) was put between with Rear Case and aluminum materials.

⑦ Remove the Rear Case (M). (Screws × 20)

⑧ Remove the Y DRIVE Assy.
(Connector, PCB Spacer × 3, Screws × 8)

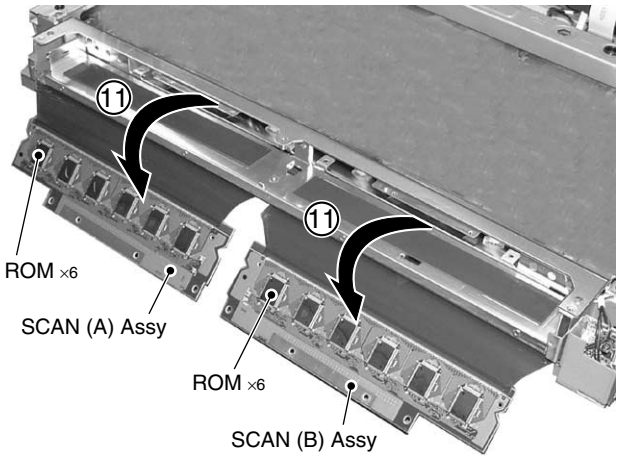
⑨ Remove the Front Chassis V. (Screws × 5)

⑩ Remove the Scan IC Spring 43L and 43R. (Screws × 1)



⑪ Reverse the SCAN (A) and SCAN (B) Assemblies.

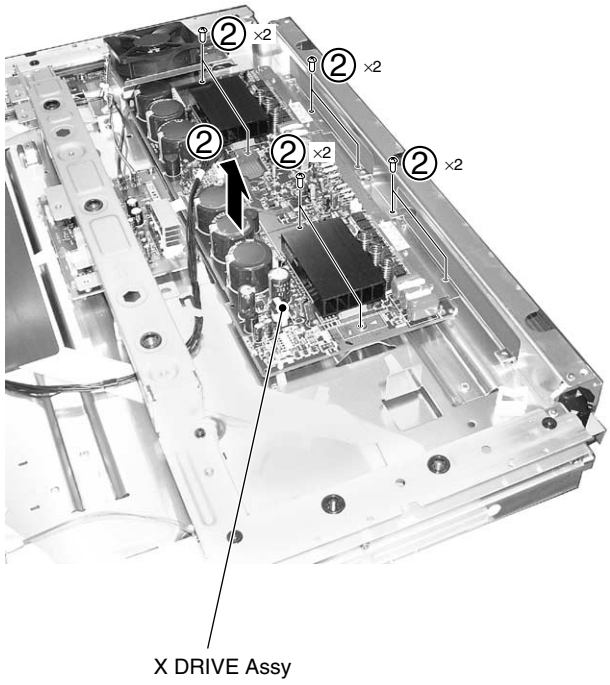
⑫ When it is necessary, exchange the ROM.



X DRIVE Assy

① Remove the Rear Case (M). (Screws × 20)

② Remove the X DRIVE Assy. (Connector, Screws × 8)

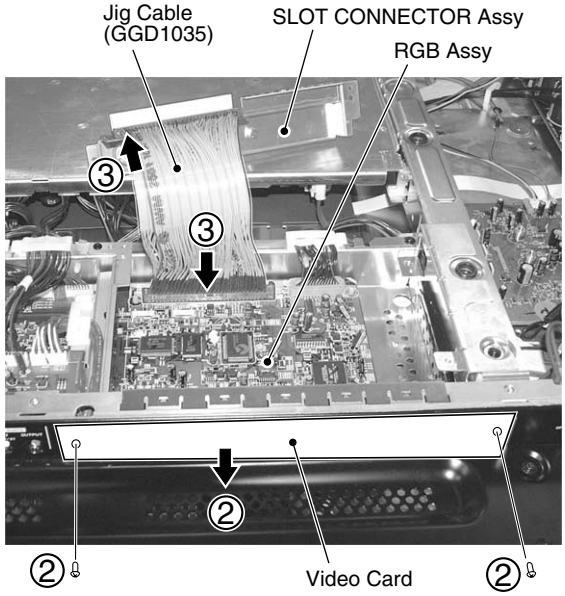


Diagnosis of the Video Card (PDA-5002)

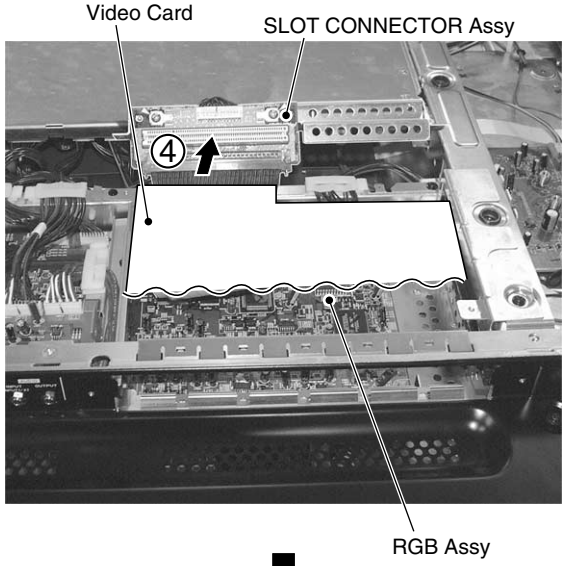
① Remove the Rear Case (M). (Screws × 20)

② Remove the Video Card. (Screws × 2)

③ Remove the SLOT CONNECTOR Assy from the RGB Assy and reconnect it with the Jig Cable (GGD1035).



④ Reconnect the Video Card.
(Slot does not pass it.)



Diagnosis

7.2 IC INFORMATION

- The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

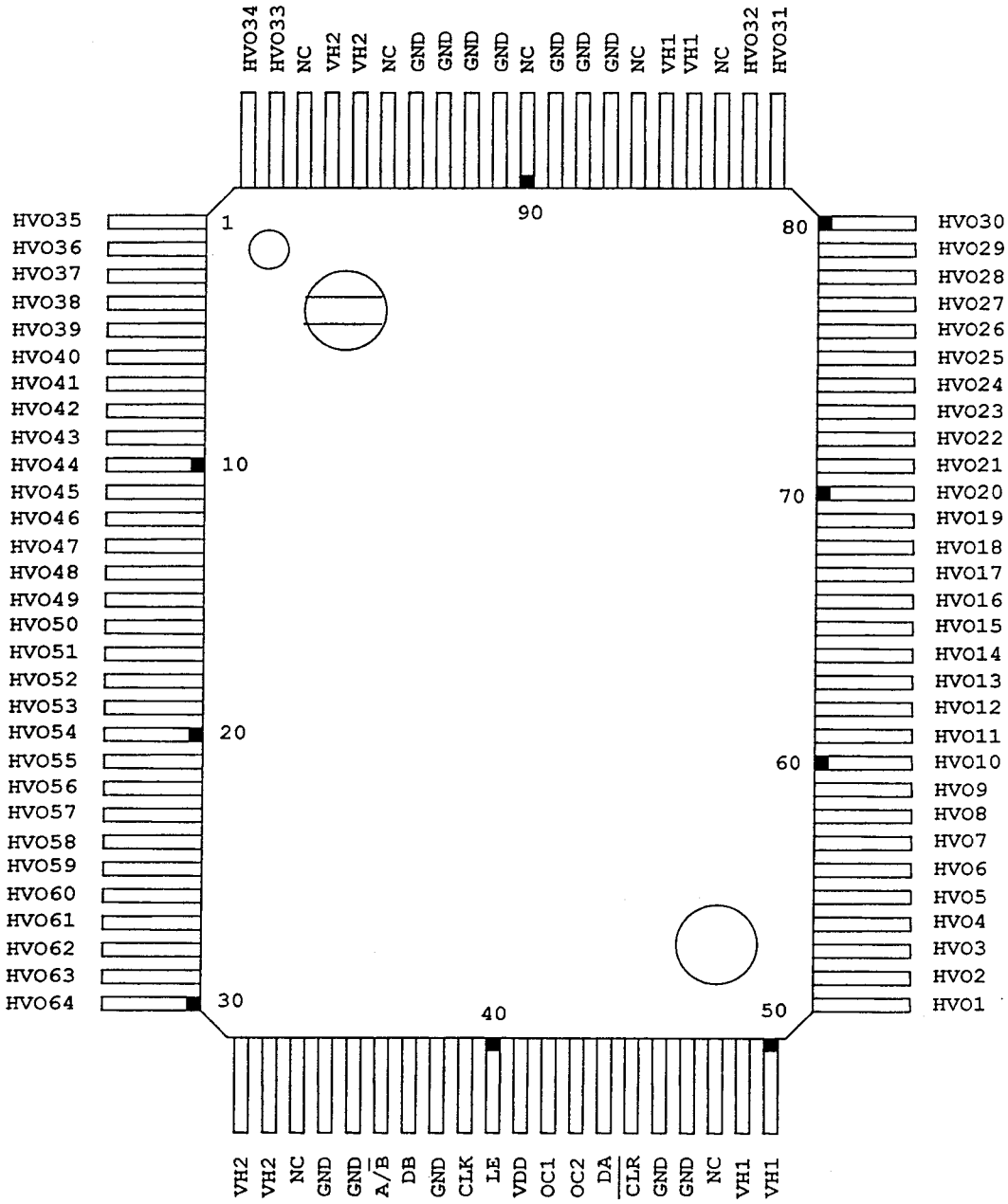
●List of IC

SN755860PJ, M30624FGAFP, HD64F2328VF, GAL22V10, M30624FGAFP, PD6358A, PST9246N, FS781BZB, ML6426CS-1, CXA3516R, BA5417, STK795-460

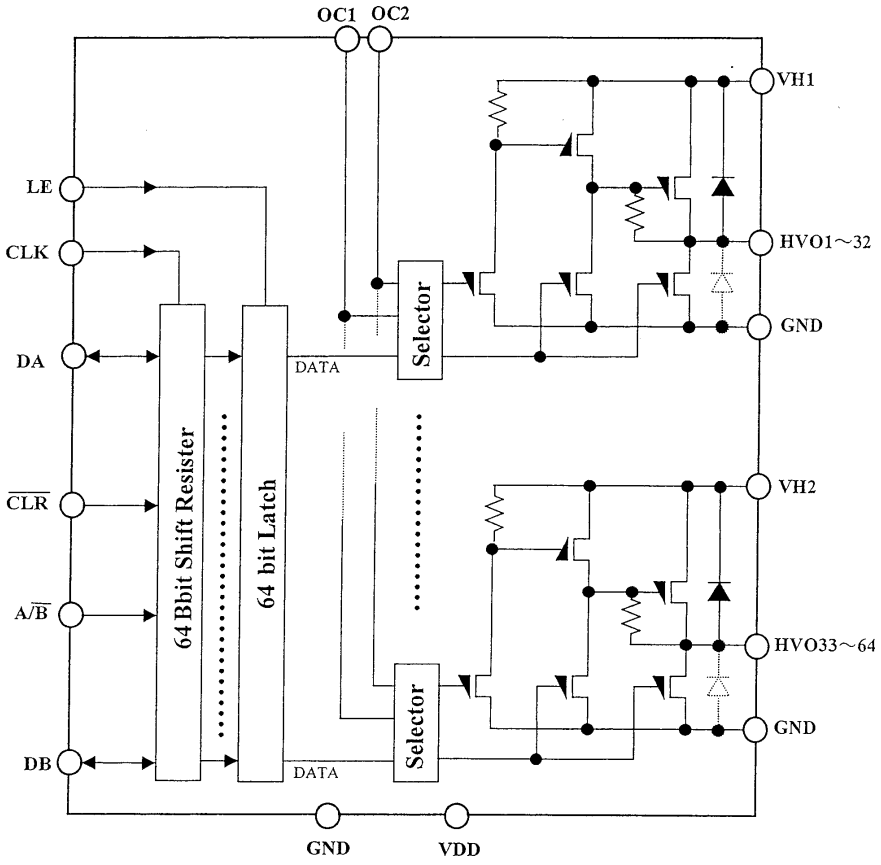
■ SN755860PJ (SCAN A ASSY : IC6201 - IC6206)
SN755860PJ (SCAN B ASSY : IC6001 - IC6006)

• Scan IC

● Pin Assignment (Top view)


HVO34 HVO33 NC VH2 VH2 NC GND GND GND GND NC GND GND GND NC VH1 VH1 NC HVO32 HVO31
90
1
80
HVO35 HVO36 HVO37 HVO38 HVO39 HVO40 HVO41 HVO42 HVO43 HVO44 HVO45 HVO46 HVO47 HVO48 HVO49 HVO50 HVO51 HVO52 HVO53 HVO54 HVO55 HVO56 HVO57 HVO58 HVO59 HVO60 HVO61 HVO62 HVO63 HVO64
10
20
30
HVO30 HVO29 HVO28 HVO27 HVO26 HVO25 HVO24 HVO23 HVO22 HVO21 HVO20 HVO19 HVO18 HVO17 HVO16 HVO15 HVO14 HVO13 HVO12 HVO11 HVO10 HVO9 HVO8 HVO7 HVO6 HVO5 HVO4 HVO3 HVO2 HVO1
70
60
50
40
VH2 VH2 NC GND GND A/B DB GND CLK LE VDD OC1 OC2 DA CLR GND GND NC VH1 VH1

● **Block Diagram**



● **Pin Function**

Name	Pin No.	I/O	Num.	Function
CLK	39	I	1	Shift clock (start edge partial response)
DA	44	I/O	1	The serial data input of shifting register
DB	37	I/O	1	The serial data output of shifting register
LE	40	I	1	It output data done a latch of by "L" level.
A/$\overline{B}$	36	I	1	A shift directional control signal of shift register
$\overline{CLR}$	45	I	1	It do data of shift register with "L" by "L" level.
OC1	42	I	1	An output control terminal of HVO
OC2	43	I	1	An output control terminal of HVO
HVO	1-30, 51-82, 99, 100	O	64	High voltage drive output (HV01-HV064)
VDD	41	-	1	Logic power supply
GND	34, 35, 38, 46, 47, 87-89, 91-94	-	12	Standard potential. This is common to HV01-HV064.
VH1	84, 85, 49, 50	-	4	The high potential circuit power supply which is common to HV01-HV032
VH2	31, 32, 96, 97	-	4	The high potential circuit power supply which is common to HV033-HV064
NC	33, 48, 95, 83, 86, 90, 98	-	7	It is the insulation electrically

■ M30624FGAFP (RGB ASSY : IC5505)

• Main Microcomputer

● Pin Function

No.	Pin Name	Function
1	TXD	Serial 3 line data output
2	CLK	Serial 3 line clock
3	FAN	FAN control
4	VOL	Audio VOL control
5	H_SYNC	Horizontal synchronizing signal input for signal distinction
6	V_SYNC	Vertical synchronizing signal input for signal distinction
7	DPMS	SYNC select for power management
8	BYTE	GND
9	CNVSS	Power supply in flash writing, STB +5V
10	NC	Non connection
11	XCONT (Not used)	GND
12	RST	Reset input
13	XOUT	Main clock output
14	VSS	GND
15	XIN	Main clock input
16	VCC	5V standby power
17	Not used	Pull-up
18	REM	Remote control signal input
19	REQ_MD	Communication request from the module microcomputer
20	KEY_SCAN	Key data input
21	WP SW	E2PROM write permission for Plug &Play
22	SLOT_ST2	Inside / outside product distinction of SLOT
23	FUNC1	Outside product SLOT function output 1
24	FUNC2	Outside product SLOT function output 2
25	NC	Non connection
26	NC	
27	NC	
28	NC	
29	SCL	Clock output for IICbus
30	SDA	Data input/output for IICbus
31	TXD1	Data output (flash writing / external equipment communication)
32	RXD1	Data input (flash writing / external equipment communication)
33	CLK1	Clock for flash writing
34	BUSY1	Busy for flash writing
35	TXD0	Data output for communication with the module microcomputer
36	RXD0	Data input for communication with the module microcomputer
37	LED_G	Green LED lighting
38	LED_R	Red LED lighting
39	NC	Non connection
40	IN1DET	INPUT1 input detection
41	EPM	EPM input for flash writing
42	AUDIO_NG	Audio NG detection
43	NC	Non connection
44	NC	
45	OSD_CE	Enable for OSD
46	CE	CE input for flash writing (pull-up)
47	WU_CE	Enable for waide microcomputer
48	FAN_NG	NG detection for fan
49	IN5DET	Video signal input detection
50	CB_MUTE	Combination mute

No.	Pin Name	Function
51	FR_SEL	Output free running in the video signal no input
52	RGB_SEL	Input switch of INPUT1 (Dsub15) / INPUT2 (BNC)
53	POWER	POWER ON/OFF output
54	BUSY	Busy input from the microcomputer
55	BUSY30	Busy input from IC30
56	IN3DET	INPUT3 input detection
57	IN4DET	INPUT4 input detection
58	ACL_SW	Switch the peak ACL function
59	NC	Non connection
60	PNL_MUTE	Panel drive stop
61	NC	Non connection
62	VCC	5V standby power
63	I_DET	I/P distinction signal (extra)
64	VSS	GND
65	NC	Non connection
66	DIN_SEL	Digital input switch trigger (IC102 side)
67	SDIN_SEL	Digital input switch trigger (DVI input side)
68	FWE	Enable for flash writing of the wide microcomputer
69	MD2	Mode setting for flash writing of the wide microcomputer
70	RST_WU	Reset the wide microcomputer
71	WE_WU	Flash writing permission output for wide microcomputer
72	WE_MD	Flash writing permission output for module
73	NC	Non connection
74	REQ_WU	Communication request from the wide microcomputer
75	RST2	Reset detection of wide microcomputer system 3.3V power supply
76	EXT_INT	Input signal switch
77	A_MUTE1	Audio mute 1
78	A_MUTE2	Audio mute 2
79	H_POL	H.SYNC polarity distinction
80	V_POL	V.SYNC polarity distinction
81	(E)SCL	I2C-BUS clock of E2PROM exclusive use
82	(E)SDA	I2C-BUS data of E2PROM exclusive use
83	EEPRST	E2PROM reset
84	FIX_VAR	AUDIO output signal switch (fixing, variable)
85	SYNC_ST	Presence distinction input of SYNC
86	NC	Non connection
87	NC	
88	SIGRST	Trigger for synchronous processing time shortening
89	NC	Non connection
90	PLD_CE	Enable for SYNC control PLD
91	NC	Non connection
92	NC	
93	SLOT_ST	A/D input for model distinction
94	TEMP3	A/D input for temperature sensor 3
95	TEMP2	A/D input for temperature sensor 2
96	AVSS	GND for AD conversion (GND connection)
97	PM_ST	Pull-up
98	VREF	AD conversion reference voltage
99	AVCC	Power supply for AD conversion
100	RXD	Serial 3 line data input

■ HD64F2328VF (RGB ASSY : IC5601)

• Wide Microcomputer

●Pin Function

No.	Pin Name	Function
1	NC	Non connection
2	Not used	PU
3	VSS	GND
4	NC	Non connection
5	VCC	3.3V power supply
6	UA0	Address bus 0 with each IC
7	UA1	Address bus
8	UA2	
9	UA3	
10	VSS	GND
11	UA4	Address bus
12	UA5	
13	UA6	
14	UA7	
15	UA8	
16	UA9	
17	UA10	
18	UA11	
19	VSS	GND
20	UA12	Address bus
21	UA13	
22	UA14	
23	UA15	
24	UA16	Address bus for external flash memory
25	UA17	
26	UA18	
27	UA19	
28	VSS	GND
29	WU_CE	Main microcomputer communication enable
30	NC	Non connection
31	VI	Vertical synchronization interrupt input
32	VACT_FRC	Vact interrupt input after frame rate conversion
33	DE_W	DE interrupt for start line detection of panel link input V
34	VD_W	Vertical synchronization interrupts before FRC
35	VSS	GND
36	VSS	
37	VACT_IP	Histogram acquisition interrupt input
38	FILM_IP	Acquisition interrupt input of film information
39	VCC	3.3V power supply
40	UD0	Data bus
41	UD1	
42	UD2	
43	UD3	
44	VSS	GND
45	UD4	Data bus

No.	Pin Name	Function
46	UD5	Data bus
47	UD6	
48	UD7	
49	UD8	
50	UD9	
51	UD10	
52	UD11	
53	VSS	GND
54	UD12	Data bus
55	UD13	
56	UD14	
57	UD15	
58	VCC	3.3V power supply
59	D_TXD	Communication data output to the main unit microcomputer
60	EXT_TXD	232C communication output to the external personal computer (FLASH2)
61	D_RXD	Communication data input from the main unit microcomputer
62	EXT_RXD	232C communication input from the external personal computer (FLASH2)
63	D_CLK	Communication clock input from the main unit microcomputer
64	D_BUSY	BUSY for the main unit microcomputer
65	VSS	GND
66	CS_30	Chip select output for IC30
67	VSS	GND
68	VSS	
69	CS_FLASH	Chip select output for 16M flash
70	A19_FLASH	Control output of 16M flash address A19
71	REQ_WU	Request for the main unit microcomputer
72	CE_W	DE for start line detection of panel link input V
73	VD_W	Vertical synchronization before FRC
74	NC	Non connection
75	NC	
76	NC	
77	NC	
78	NC	
79	SGLB_AD	Switching output of a clock and 1/2 clock
80	FWE	Writing enable signal input for built-in flash memory
81	RESET	Reset input from the main unit microcomputer and reset IC
82	Not used	Pull-up
83	Not used	
84	VCC	3.3V power supply
85	XTAL	Connect a ceramic resonator (25MHz)
86	EXTAL	
87	VCC	3.3V power supply
88	PHAI	System clock output
89	VCC	3.3V power supply
90	SGLB_IP	Single input selecting output of IC102

No.	Pin Name	Function
91	RDB	Reading of external address space
92	HWRB	Upper rank data (D15 to D8) writing of external address space
93	PLL_CE	Chip enable signal output for AD/PLL
94	WAIT_IP	WAIT input for IC102
95	NC	Non connection
96	NC	
97	TXD_WU	Communication data output (AD/PLL)
98	NC	Non connection
99	VSS	GND
100	VSS	
101	SCK_WU	Communication clock input/output (AD/PLL)
102	WAIT_FLASH	WAIT input for external flash memory
103	AVCC	3.3V power supply
104	VREF	A/D and D/A reference voltage input
105	ULK_PLL	PLL unlock signal input
106	EXT_FILM	External film signal input
107	Not used	Pull-up
108	Not used	
109	ACL_PC	ACL input for PC (A/D input)
110	Not used	Pull-up
111	INa_30	NC
112	INb_30	
113	AVSS	GND
114	VSS	
115	NC	Non connection
116	NC	
117	HD_W	Horizontal sync. signal
118	FI	FILM mode detecting input
119	HI	Horizontal sync. count input
120	FDET_IP	System frequency detecting input
121	EMG_IP	IC102 forced hardware through output
122	IP_KILL	IC101 forced stop output
123	MD0	Wide microcomputer operation mode (mode 6 fixing) (0)
124	MD1	Wide microcomputer operation mode (mode 6 fixing) (1)
125	MD2	Wide microcomputer operation mode (mode 6 fixing) (2)
126	IC_RST	Reset signal input for ASIC
127	CS_102	Chip select output for IC102
128	CS_101	Chip select output for IC101

■ HD64F2328VF (DIGITAL VIDEO ASSY : IC1101)

• Panel Microcomputer

● Pin Function

No.	Pin Name	Function
1	CS_23	PE5064 (IC 1703) control output
2	NC	NC terminal
3	VSS	GND
4	VSS	GND
5	VCC	3.3V power supply
6	UA0	Address bus
7	UA1	Address bus
8	UA2	Address bus
9	UA3	Address bus
10	VSS	Address bus
11	UA4	Address bus
12	UA5	Address bus
13	UA6	Address bus
14	UA7	Address bus
15	UA8	Address bus
16	UA9	Address bus
17	UA10	Address bus
18	UA11	Address bus
19	VSS	GND
20	UA12	Address bus
21	UA13	Address bus
22	UA14	Address bus
23	UA15	Address bus
24	UA16	Address bus
25	UA17	Address bus
26	UA18	Address bus
27	UA19	Address bus
28	VSS	GND
29	UA20	Address bus
30	PA5	NC terminal
31	PA6	NC terminal
32	PA7	NC terminal
33	CE_PN	Enables/ for panel microcomputer
34	CE_PN	Enables/ for panel microcomputer
35	VSS	GND
36	VSS	GND
37	APLP	The APL value acquisition trigger signal input.
38	VD_31	The V signal input from IC 1401 (PD 6358).
39	VCC	3.3V power supply
40	UD0	Data bus
41	UD1	Data bus
42	UD2	Data bus
43	UD3	Data bus
44	VSS	GND
45	UD4	Data bus
46	UD5	Data bus
47	UD6	Data bus
48	UD7	Data bus
49	UD8	Data bus
50	UD9	Data bus

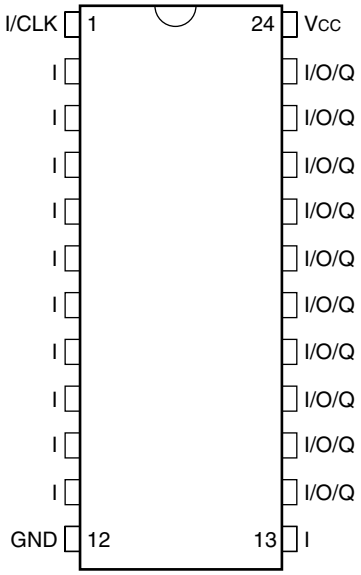
No.	Pin Name	Function
51	UD10	Data bus
52	UD11	Data bus
53	VSS	GND
54	UD12	Data bus
55	UD13	Data bus
56	UD14	Data bus
57	UD15	Data bus
58	VCC	3.3V power supply
59	D_TXD	Communication with IC 1207 (a module microcomputer).
60	EXT_TXD	Communication with the outside (program notes).
61	D_RXD	Communication with IC 1207 (a module microcomputer).
62	EXT_RXD	Communication with the outside (program notes).
63	D_CLK	Communication with IC 1207 (a module microcomputer).
64	P60	NC terminal
65	VSS	GND
66	CS_FLASH	A flash memory control terminal
67	VSS	GND
68	VSS	GND
69	P61	NC terminal
70	UDREQ	IC 1703 (PE5064) control terminal
71	P63	NC terminal
72	WE_FLASH	A flash memory note control signal (unused).
73	BUSY	The command receipt of a message lye Norwich output
74	REQ_PU	A communication demand to a module microcomputer.
75	SEL23B	IC 1703 (PE5064) control terminal
76	CLRB	IC 1703 (PE5064) control terminal
77	FR_SEL	The free LAN select signal output
78	RST31B	The reset output to IC1301, IC1401(PD6358)
79	RST23B	The reset output to IC 1703 (PE5064)
80	FWE	Microcomputer program note control signal
81	RESET	Reset input
82	NMI	The at the rate of tang input (unuse)
83	STBY	The hardware standby input (unused)
84	VCC	3.3V power supply
85	XTAL	A clock oscillation child connection terminal
86	EXTAL	A clock oscillation child connection terminal
87	VSS	GND
88	PF7	NC terminal
89	VCC	3.3V power supply
90	PF6	NC terminal
91	RDB	A read control terminal from an outside slave device
92	HWRB	A wright control terminal to an outside slave device
93	PF3	NC terminal
94	PF2	NC terminal
95	PF1	NC terminal
96	PF0	NC terminal
97	P50	NC terminal
98	P51	NC terminal
99	VSS	GND
100	VSS	GND

No.	Pin Name	Function
101	P52	NC terminal
102	P53	NC terminal
103	AVCC	3.3V power supply
104	VREF	A/D, D/A reference voltage input (unused)
105	STOPB	The drive control input from IC 1703 (PE5064)
106	P41	NC terminal
107	RYBY	The flash memory note ready input
108	ADR_K_EMG_L1	The emergency input from panel bottom address resonance block.
109	ADR_K_EMG_U1	The emergency input from panel upper part address resonance block
110	ADR_K_EMG_L2	The emergency input from panel bottom address resonance block. (unused)
111	ADR_K_EMG_U2	The emergency input from panel upper part address resonance block(unused)
112	P47	NC terminal
113	AVSS	GND
114	VSS	GND
115	MUTE_ADR	The panel mute signal output
116	MUTE_SUS	The XY drive mute signal output (unused)
117	P15	NC terminal
118	HD	The HD signal input from outside ASSY (RGB ASSY, etc)
119	P13	NC terminal
120	P12	NC terminal
121	PC_VIDEO	The PC/Video identification output
122	VD	The VD signal input from outside ASSY (RGB ASSY, etc)
123	MD0	The microcomputer mode of operation select signal input
124	MD1	The microcomputer mode of operation select signal input
125	MD2	The microcomputer mode of operation select signal input
126	PG0	NC terminal
127	CS_31Y	IC1301, IC1401(PD 6358) control terminal
128	CS_31X	IC1301, IC1401(PD 6358) control terminal

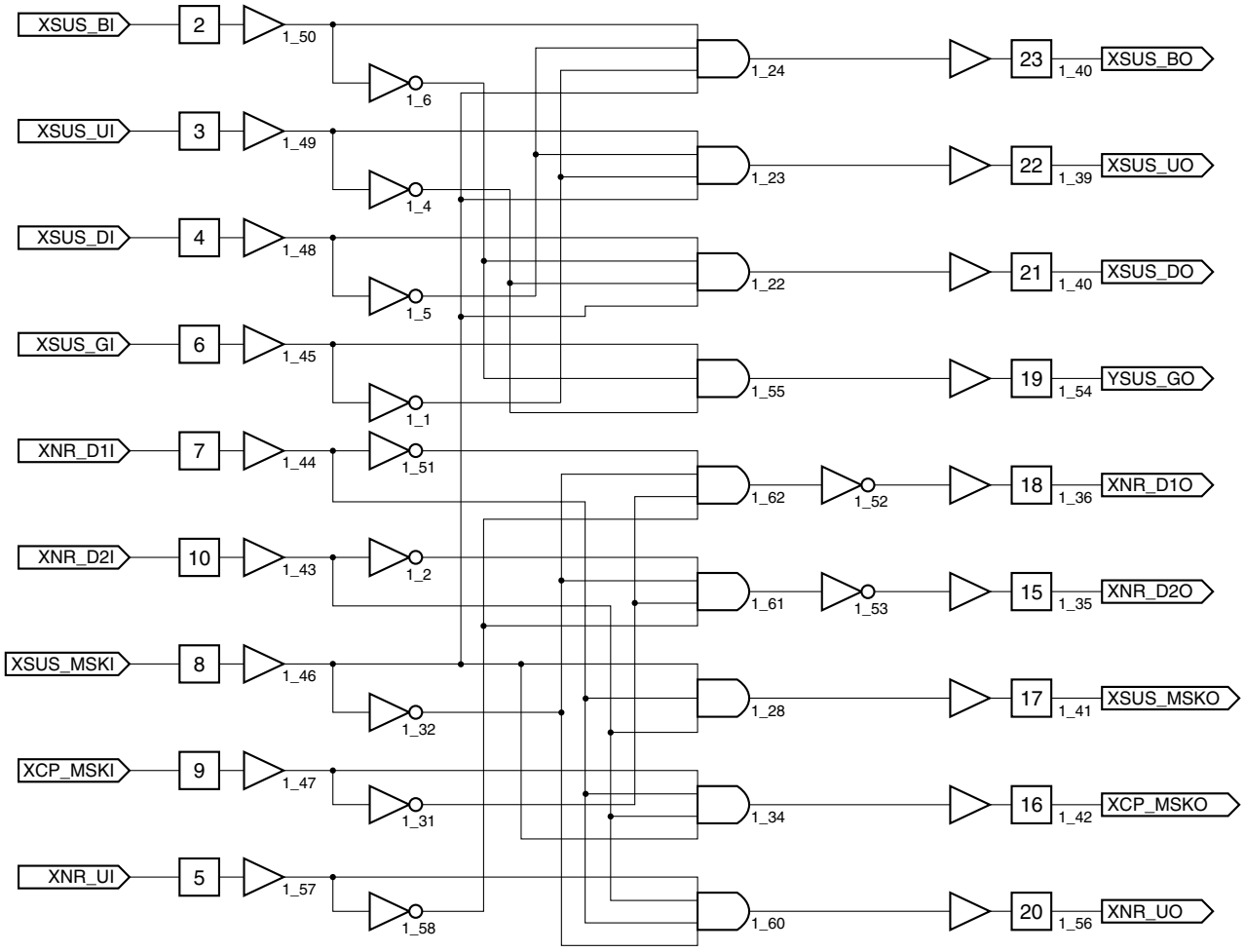
■ GAL22V10 (X DRIVE ASSY : IC2006)

- **Drive Protect PLD**

- **Pin Assignment (Top View)**



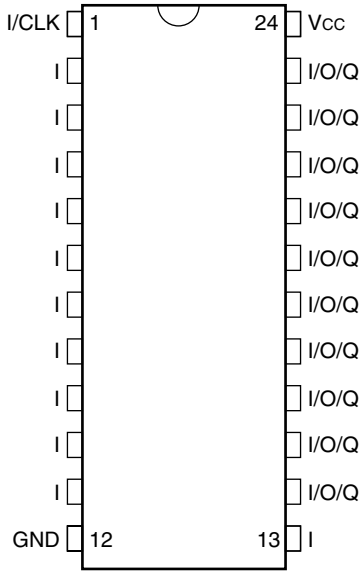
- **Block Diagram**



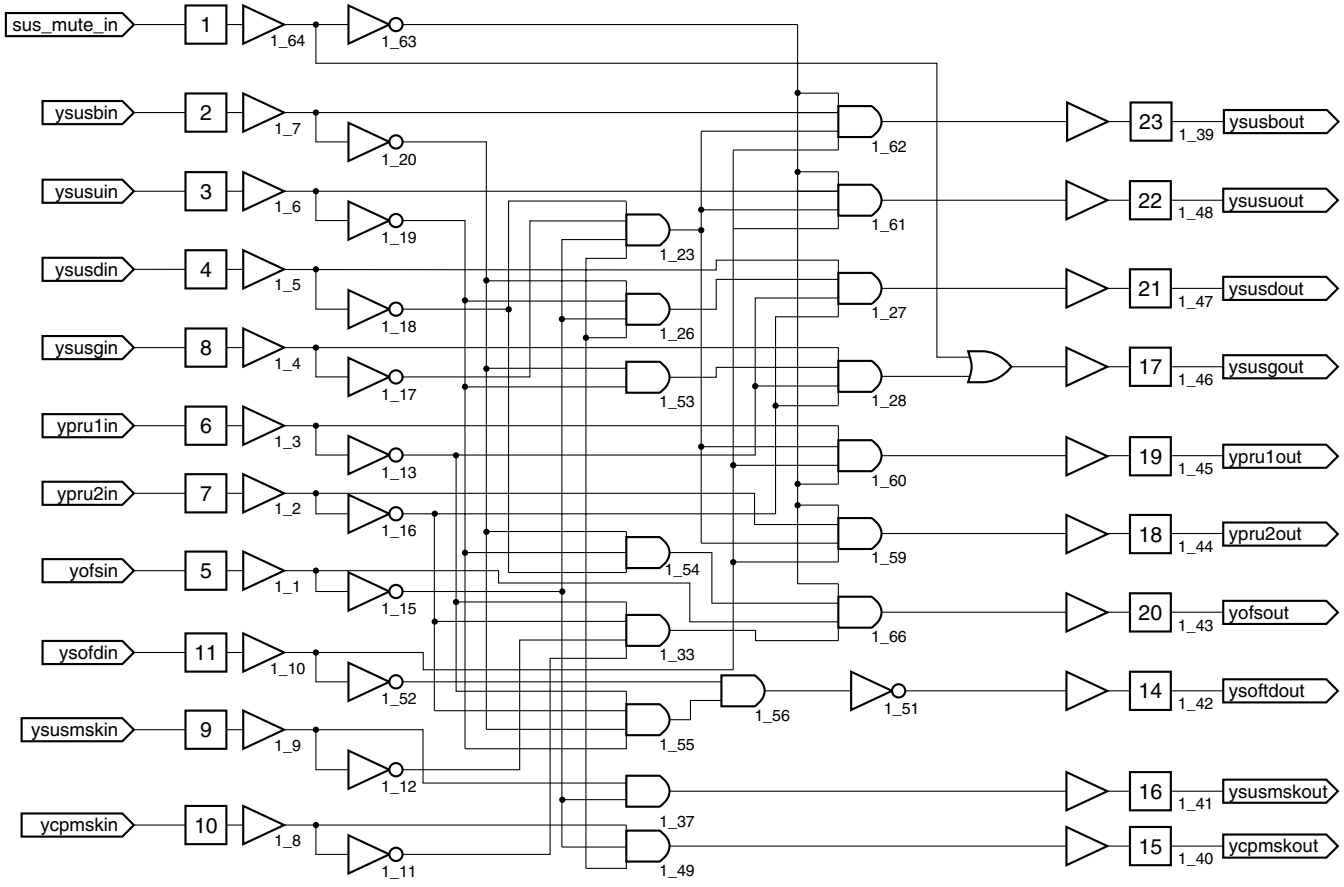
■ GAL22V10 (Y DRIVE ASSY : IC3003)

• Drive Protect PLD

● Pin Assignment (Top View)



● Block Diagram



■ M30624FGAFP (DIGITAL VIDEO ASSY : IC1207)

• Module Microcomputer

● Pin Function

No.	Pin Name	Function
1	TXD	Serial 3 line data output for communication with a panel microcomputer
2	CLK	Serial 3 line clock for communication with a panel microcomputer
3	NC	NC terminal
4	NC	NC terminal
5	NC	NC terminal
6	NC	NC terminal
7	NC	NC terminal
8	BYTE	The external data bus width reshuffling input (I am unused and connect GND)
9	CNVSS	A power supply for program note (a note, 5V, usually, pull-down
10	XCIN	NC terminal
11	XCOUT	NC terminal
12	RESET	A reset input terminal
13	XOUT	Clock output terminal
14	VSS	GND
15	XIN	Clock input terminal
16	VCC	5V standby power
17	NMI	Because a NMI interruption terminal is unused, It handle pull up.
18	REM	The SR signal input
19	REQ_PU	A communication demand from a panel microcomputer (the pulse meter acquisition)
20	/SW_TRG	Main switch OFF / ON search
21	NC	NC terminal
22	NC	NC terminal
23	NC	NC terminal
24	AC_OFF	AC power OFF search and power supply ASSY differentiation.
25	PD_TRIGGER	Power down search
26	NC	NC terminal
27	NC	NC terminal
28	NC	NC terminal
29	SCL	EEPROM, IIC communication with power supply ASSY
30	SDA	EEPROM, IIC communication with power supply ASSY
31	TXD1	Communication with the outside (a program note)
32	RXD1	Communication with the outside (a program note)
33	CLK1	Communication with the outside (a program note)
34	BUSY1	Communication with the outside (a program note)
35	TXD0	Communication with outside ASSY (microcomputers main in RGB ASSY, etc)
36	RXD0	Communication with outside ASSY (microcomputers main in RGB ASSY, etc)
37	NC	NC terminal
38	REQ_MD/A_MUTE	232C communication demand (a request to a main microcomputer) / audio system mute
39	NC	NC terminal
40	NC	NC terminal
41	EPM	The EPM input for program note (L fixation)
42	NC	NC terminal
43	PU_CE	Enables/ for panel microcomputer
44	NC	NC terminal
45	MOD_SW/A_NG	The model of machines distinction input / audio system NG input
46	CE	The CE input for program note (H fixation)
47	DITHER/SW_STC	Power supply search of a dither setting / media receiver for module
48	NC	NC terminal
49	/SW_STP	Power supply search of a panel
50	NC	NC terminal

No.	Pin Name	Function
51	NC	NC terminal
52	RELAY	The output for power supply ON / OFF change
53	POWER/MSTATE	Input / SII861 master information for power supply ON / OFF change
54	NC	NC terminal
55	WE_PN	Buffer state control for panel microcomputer note
56	MD0	The panel microcomputer mode of operation change output
57	MD2	The panel microcomputer mode of operation change output
58	FWE	The panel microcomputer program note control signal output
59	RST_PU	The panel microcomputer reset output
60	PN_MUTE	The panel mute input
61	NC	NC terminal
62	VCC	5V standby power
63	NC	NC terminal
64	VSS	GND
65	NC	NC terminal
66	NC	NC terminal
67	/A_SCL	IIC clock for audio system
68	/A_SDA	IIC data for audio system
69	APD_MUTE	A mute signal of address series
70	ADR_K_PD	The address oscillatory system PD input
71	ADR_PD	The address series PD input
72	DCC_PD	The power supply system PD input
73	NC	NC terminal
74	NC	NC terminal
75	RST2	Panel microcomputer reset search
76	NC	NC terminal
77	/DDC_SCL	IIC communication with a media receiver
78	/DDC_SDA	IIC communication with a media receiver
79	NC	NC terminal
80	NC	NC terminal
81	DEW_DET	The dew condensation sensor input
82	NC	NC terminal
83	NC	NC terminal
84	NC	NC terminal
85	NC	NC terminal
86	LED_G	Green LED lighting (LED on interface ASSY in a panel module)
87	LED_R	Red LED lighting (LED on interface ASSY in a panel module)
88	NC	NC terminal
89	BUSY	Communication permission / inhibiting signal from a panel microcomputer
90	NC	NC terminal
91	NC	NC terminal
92	/F_KEY1	The front KEY input
93	MAX_PLS2/F_KEY2	The terminal / front KEY input for brightness setting mode of operation change
94	TEMP1	The A/D input for temperature sensor
95	MAX_PLS? /CCKM	Terminal / connection search for brightness setting mode of operation change
96	AVSS	GND for AD conversion
97	PM_ST	The A/D input for model of machines distinction
98	VREF	Reference voltage for AD conversion
99	AVCC	5V standby power for AD conversion
100	RXD	Serial 3 line data entry for communication with a panel microcomputer

■ PD6358A (DIGITAL VIDEO ASSY : IC1301)

• Picture Improved IC

● Pin Function

No.	Pin Name	Function
1	VSS	GND
2	TESTO6	Test output terminal (unused)
3	OSDCLK	The CLK input for OSD
4	TTST	Test input terminal (unused)
5	VDDI	2.5V power supply
6	OVDDE-01	3.3V power supply
7	AGO0	Address data output (G signal)
8	VDDI	2.5V power supply
9	AGO2	Address data output (G signal)
10	AGO3	Address data output (G signal)
11	AGO4	Address data output (G signal)
12	VDDI	2.5V power supply
13	ARO6	Address data output (R signal)
14	AGO7	Address data output (G signal)
15	VDDI	2.5V power supply
16	ARO9	Address data output (R signal)
17	ABO9	Address data output (B signal)
18	VDDI	2.5V power supply
19	ADRCLKO2	The address CLK output (for panel upper part)
20	ARO12	Address data output (R signal)
21	ARO13	Address data output (R signal)
22	AGO14	Address data output (G signal)
23	AGO15	Address data output (G signal)
24	ARO16	Address data output (R signal)
25	ARO17	Address data output (R signal)
26	VSS	GND
27	ABO17	Address data output (B signal)
28	AGO17	Address data output (G signal)
29	AGO18	Address data output (G signal)
30	ABO19	Address data output (B signal)
31	UDAT15	Microcomputer data bus
32	UDAT12	Microcomputer data bus
33	UDAT9	Microcomputer data bus
34	UDAT5	Microcomputer data bus
35	OVDDE-06	3.3V power supply
36	APLP	APL value output trigger signal
37	OVDDE-08	3.3V power supply
38	CS5BI	The chip select input
39	CS4BI	The chip select input
40	UADRI13	Microcomputer address bus
41	UADRI9	Microcomputer address bus
42	UADRI6	Microcomputer address bus
43	UADRI2	Microcomputer address bus
44	UADRI1	Microcomputer address bus
45	TESTI2	Test input terminal (unused)
46	BIT0	The subfield No output (the 0 bit)
47	OVDDE-11	3.3V power supply
48	TESTO4	Test output terminal (unused)
49	ARO39	Address data output (G signal)
50	AGO38	Address data output (G signal)

No.	Pin Name	Function
51	VSS	GND
52	ABO37	Address data output (B signal)
53	ABO36	Address data output (B signal)
54	ARO36	Address data output (R signal)
55	ABO34	Address data output (B signal)
56	ADRCLKO4	The address CLK output (for panel bottom part)
57	AGO33	Address data output (G signal)
58	AGO32	Address data output (G signal)
59	AGO31	Address data output (G signal)
60	AGO30	Address data output (G signal)
61	AGO29	Address data output (G signal)
62	VDDI	2.5V power supply
63	ABO27	Address data output (B signal)
64	AGO26	Address data output (G signal)
65	VDDI	2.5V power supply
66	AGO24	Address data output (G signal)
67	VDDI	2.5V power supply
68	ABO22	Address data output (B signal)
69	VDDI	2.5V power supply
70	ARO21	Address data output (R signal)
71	ARO20	Address data output (R signal)
72	VDDI	2.5V power supply
73	OVDDE-14	3.3V power supply
74	TDI	The JTAG input
75	RBI9	The R picture B aspect signal input (the ninth bit)
76	VSS	GND
77	RBI8	The R picture B aspect signal input (the eighth bit)
78	RBI6	The R picture B aspect signal input (the sixth bit)
79	RBI4	The R picture B aspect signal input (the fourth bit)
80	OVSS-09	GND
81	RSTB	Reset input
82	GBI8	The G picture B aspect signal input (the eighth bit)
83	OVDDE-18	3.3V power supply
84	GBI5	The G picture B aspect signal input (the fifth bit)
85	GBI2	The G picture B aspect signal input (the second bit)
86	DEI	DE signal input
87	BBI6	The B picture B aspect signal input (the sixth bit)
88	BBI3	The B picture B aspect signal input (the third bit)
89	VDI	VD signal input
90	HDI	HD signal input
91	RAI6	The R picture A aspect signal input (the sixth bit)
92	RAI2	The R picture A aspect signal input (the second bit)
93	TESTI0	Test input terminal (unused)
94	OVSS-11	GND
95	GAI7	The G picture A aspect signal input (the seventh bit
96	GAI3	The G picture A aspect signal input (the third bit)
97	GAI0	The G picture A aspect signal input (the 0 bit)
98	BAI6	The B picture A aspect signal input (the sixth bit)
99	BAI3	The B picture A aspect signal input (the third bit)
100	BAI0	The B picture A aspect signal input (the 0 bit)

No.	Pin Name	Function
101	TESTO7	Test output terminal (unused)
102	TESTO5	Test output terminal (unused)
103	OSDH	OSDH input
104	BLK	OSDBLK input
105	OSDB	OSDB signal input
106	NC	NC terminal
107	ARO1	Address data output (R signal)
108	ARO2	Address data output (R signal)
109	ARO3	Address data output (R signal)
110	ARO4	Address data output (R signal)
111	ARO5	Address data output (R signal)
112	ABO5	Address data output (B signal)
113	ARO7	Address data output (R signal)
114	ARO8	Address data output (R signal)
115	ABO8	Address data output (B signal)
116	AGO9	Address data output (G signal)
117	AGO10	Address data output (G signal)
118	ADRCLKO1	Address CLK output (for panel upper part)
119	ABO11	Address data output (B signal)
120	ABO12	Address data output (B signal)
121	ARO14	Address data output (R signal)
122	ARO15	Address data output (R signal)
123	ABO15	Address data output (B signal)
124	ABO16	Address data output (B signal)
125	AGO16	Address data output (G signal)
126	ARO18	Address data output (R signal)
127	AGO19	Address data output (G signal)
128	OVDDE-05	3.3V power supply
129	UDAT13	Microcomputer data bus
130	UDAT10	Microcomputer data bus
131	UDAT6	Microcomputer data bus
132	UDAT3	Microcomputer data bus
133	UDAT0	Microcomputer data bus
134	OVDDE-07	3.3V power supply
135	LR	The panel LR select input
136	RDBI	Microcomputer read control terminal
137	CLKSEL	CLK select input
138	UADRI10	Microcomputer address bus
139	UADRI7	Microcomputer address bus
140	UADRI3	Microcomputer address bus
141	CYCLEB	Address data output control signal
142	BIT2	Subfield No. output (the second bit)
143	SFSTB	Address data output control signal
144	OVSS-05	GND
145	TESTO2	Test output terminal (unused)
146	ABO38	Address data output (B signal)
147	ARO38	Address data output (R signal)
148	ARO37	Address data output (R signal)
149	AGO36	Address data output (G signal)
150	ARO35	Address data output (R signal)

No.	Pin Name	Function
151	ADRCLKO3	The address CLK output (for panel bottom part)
152	ABO33	Address data output (B signal)
153	ABO32	Address data output (B signal)
154	VDDI	2.5V power supply
155	ABO30	Address data output (B signal)
156	VDDI	2.5V power supply
157	ABO28	Address data output (B signal)
158	ARO28	Address data output (R signal)
159	ABO26	Address data output (B signal)
160	ABO25	Address data output (B signal)
161	ABO24	Address data output (B signal)
162	ARO24	Address data output (R signal)
163	ARO23	Address data output (R signal)
164	ARO22	Address data output (R signal)
165	AGO21	Address data output (G signal)
166	AGO20	Address data output (G signal)
167	TDO	JTAG signal
168	TMS	JTAG signal
169	RBI7	The R picture B aspect signal input (the seventh bit)
170	TCK	JTAG signal
171	RBI5	The R picture B aspect signal input (the fifth bit)
172	RBI3	The R picture B aspect signal input (the third bit)
173	RBI1	The R picture B aspect signal input (the first bit)
174	OVDDE-16	3.3V power supply
175	GBI7	The G picture B aspect signal input (the seventh bit)
176	OVSS-10	GND
177	GBI4	The G picture B aspect signal input (the fourth bit)
178	GBI1	The G picture B aspect signal input (the first bit)
179	BBI9	The B picture B aspect signal input (the ninth bit)
180	BBI5	The B picture B aspect signal input (the fifth bit)
181	BBI2	The B picture B aspect signal input (the second bit)
182	RAI9	The R picture A aspect signal input (the ninth bit)
183	CLK3	CLK input terminal (unused)
184	RAI5	The R picture A aspect signal input (the fifth bit)
185	RAI1	The R picture A aspect signal input (the first bit)
186	TESTI1	Test input terminal (unused)
187	GAI9	The G picture A aspect signal input (the ninth bit)
188	GAI6	The G picture A aspect signal input (the sixth bit)
189	GAI2	The G picture A aspect signal input (the second bit)
190	BAI9	The B picture A aspect signal input (the ninth bit)
191	BAI5	The B picture A aspect signal input (the fifth bit)
192	BAI2	The B picture A aspect signal input (the second bit)
193	BAI1	The B picture A aspect signal input (the first bit)
194	OVSS-01	GND
195	OVSS-02	GND
196	OSDG	OSDG signal input
197	ARO0	Address data output (R signal)
198	ABO0	Address data output (B signal)
199	ABO1	Address data output (B signal)
200	ABO2	Address data output (B signal)

No.	Pin Name	Function
201	ABO3	Address data output (B signal)
202	ABO4	Address data output (B signal)
203	OVDDE-02	3.3V power supply
204	ABO6	Address data output (B signal)
205	ABO7	Address data output (B signal)
206	VDDI	2.5V power supply
207	OVDDE-03	3.3V power supply
208	ARO10	Address data output (R signal)
209	ABO10	Address data output (B signal)
210	AGO11	Address data output (G signal)
211	AGO12	Address data output (G signal)
212	ABO13	Address data output (B signal)
213	ABO14	Address data output (B signal)
214	OVDDE-04	3.3V power supply
215	OVSS-03	GND
216	ARO19	Address data output (R signal)
217	TESTO1	Test output terminal (unused)
218	UDAT14	Microcomputer data bus
219	UDAT11	Microcomputer data bus
220	UDAT7	Microcomputer data bus
221	UDAT4	Microcomputer data bus
222	UDAT1	Microcomputer data bus
223	VDRD	V signal output
224	HWRBI	Microcomputer wright control terminal
225	UADRI14	Microcomputer address bus
226	OVDDE-09	3.3V power supply
227	UADRI11	Microcomputer address bus
228	UADRI8	Microcomputer address bus
229	UADRI4	Microcomputer address bus
230	BIT3	Subfield No. output (the third bit)
231	BIT1	Subfield No. output (the first bit)
232	OVDDE-10	3.3V power supply
233	TESTO3	Test output terminal (unused)
234	ABO39	Address data output (B signal)
235	AGO37	Address data output (G signal)
236	OVSS-06	GND
237	AGO35	Address data output (G signal)
238	ADRCLKO5	Address CLK output (for panel bottom part)
239	ARO34	Address data output (R signal)
240	ARO33	Address data output (R signal)
241	ABO31	Address data output (B signal)
242	ARO31	Address data output (R signal)
243	ABO29	Address data output (B signal)
244	ARO29	Address data output (R signal)
245	OVDDE-12	3.3V power supply
246	ARO27	Address data output (R signal)
247	ARO26	Address data output (R signal)
248	ARO25	Address data output (R signal)
249	OVDDE-13	3.3V power supply
250	AGO23	Address data output (G signal)

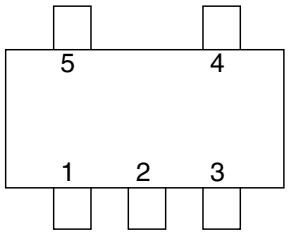
No.	Pin Name	Function
251	AGO22	Address data output (G signal)
252	VDDI	2.5V power supply
253	ABO20	Address data output (B signal)
254	OVSS-07	GND
255	OVDDE-15	3.3V power supply
256	OVSS-08	GND
257	RBI2	The R picture B aspect signal input (the second bit)
258	TRST	JTAG signal
259	GBI9	The G picture B aspect signal input (the ninth bit)
260	GBI6	The G picture B aspect signal input (the sixth bit)
261	OVDDE-17	3.3V power supply
262	GBI3	The G picture B aspect signal input (the third bit)
263	GBI0	The G picture B aspect signal input (the 0 bit)
264	BBI8	The B picture B aspect signal input (the eighth bit)
265	BBI4	The B picture B aspect signal input (the fourth bit)
266	BBI1	The B picture B aspect signal input (the first bit)
267	RAI8	The R picture A aspect signal input (the eighth bit)
268	OVDDE-19	3.3V power supply
269	RAI4	The R picture A aspect signal input (the fourth bit)
270	RAI0	The R picture A aspect signal input (the 0 bit)
271	FREERUN	The freerun control input
272	GAI8	The G picture A aspect signal input (the eighth bit)
273	GAI5	The G picture A aspect signal input (the fifth bit)
274	GAI1	The G picture A aspect signal input (the first bit)
275	BAI8	The B picture A aspect signal input (the eighth bit)
276	BAI4	The B picture A aspect signal input (the fourth bit)
277	VDDE	3.3V power supply
278	OSDV	OSDV input
279	VSS	GND
280	OSDR	OSDR signal input
281	VDDE	3.3V power supply
282	AGO1	Address data output (G signal)
283	VSS	GND
284	VDDI	2.5V power supply
285	VDDI	2.5V power supply
286	AGO5	Address data output (G signal)
287	AGO6	Address data output (G signal)
288	VDDI	2.5V power supply
289	AGO8	Address data output (G signal)
290	VSS	GND
291	ADRCLKO0	The address CLK output (for panel upper part)
292	VDDE	3.3V power supply
293	ARO11	Address data output (R signal)
294	VSS	GND
295	AGO13	Address data output (G signal)
296	VDDE	3.3V power supply
297	ABO18	Address data output (B signal)
298	VSS	GND
299	TESTO0	Test output terminal (unused)
300	VDDI	2.5V power supply

No.	Pin Name	Function
301	UDAT8	Microcomputer data bus
302	VSS	GND
303	UDAT2	Microcomputer data bus
304	VDDI	2.5V power supply
305	OVSS-04	GND
306	UADRI15	Microcomputer address bus
307	VDDI	2.5V power supply
308	UADRI12	Microcomputer address bus
309	VSS	GND
310	UADRI5	Microcomputer address bus
311	VDDI	2.5V power supply
312	NC	NC terminal
313	VSS	GND
314	AGO39	Address data output (G signal)
315	VDDE	3.3V power supply
316	ABO35	Address data output (B signal)
317	VSS	GND
318	AGO34	Address data output (G signal)
319	VDDE	3.3V power supply
320	ARO32	Address data output (R signal)
321	VSS	GND
322	ARO30	Address data output (R signal)
323	VDDI	2.5V power supply
324	AGO28	Address data output (G signal)
325	AGO27	Address data output (G signal)
326	NC	NC terminal
327	AGO25	Address data output (G signal)
328	VSS	GND
329	ABO23	Address data output (B signal)
330	VDDE	3.3V power supply
331	ABO21	Address data output (B signal)
332	VSS	GND
333	VPD	GND
334	VDDE	3.3V power supply
335	RBI0	The R picture B aspect signal input (the 0 bit)
336	VSS	GND
337	ACLK	CLK input (25MHz)
338	VDDI	2.5V power supply
339	CLK4	CLK input (50MHz)
340	VSS	GND
341	BBI7	The B picture B aspect signal input (the seventh bit)
342	VDDI	2.5V power supply
343	BBI0	The B picture B aspect signal input (the 0 bit)
344	RAI7	The R picture A aspect signal input (the seventh bit)
345	VDDI	2.5V power supply
346	RAI3	The R picture A aspect signal input (the third bit)
347	VSS	GND
348	CLK2	The image system CLK input
349	VDDI	2.5V power supply
350	GAI4	The G picture A aspect signal input (the fourth bit)
351	VSS	GND
352	BAI7	The B picture A aspect signal input (the seventh bit)

■ PST9246N (DIGITAL VIDEO ASSY : IC1208)

• **Reset IC**

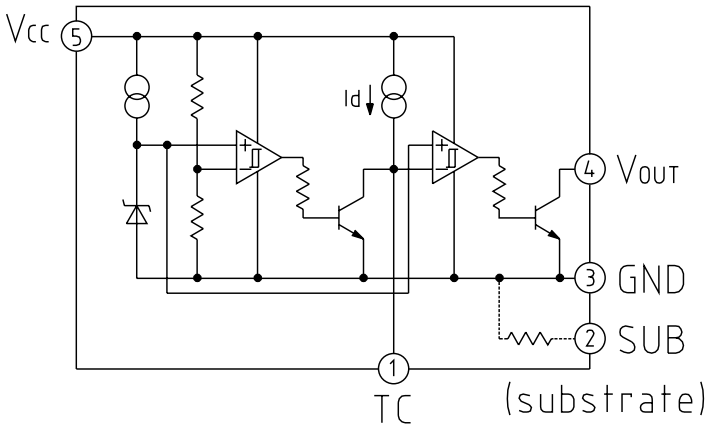
● **Pin Assignment (Top View)**



SOT-25
(TOP VIEW)

1	TC
2	SUB
3	GND
4	V_{OUT}
5	V_{CC}

● **Block Diagram**



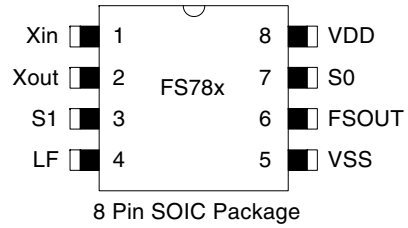
● **Pin Function**

Pin No.	Pin name	Functions
1	TC	T_{PLH} control pin
2	SUB	Substrate pin
3	GND	GND pin
4	V_{OUT}	Reset signal output pin
5	V_{CC}	V_{CC} pin/voltage detect pin

■ FS781BZB (DIGITAL VIDEO ASSY : IC1802)

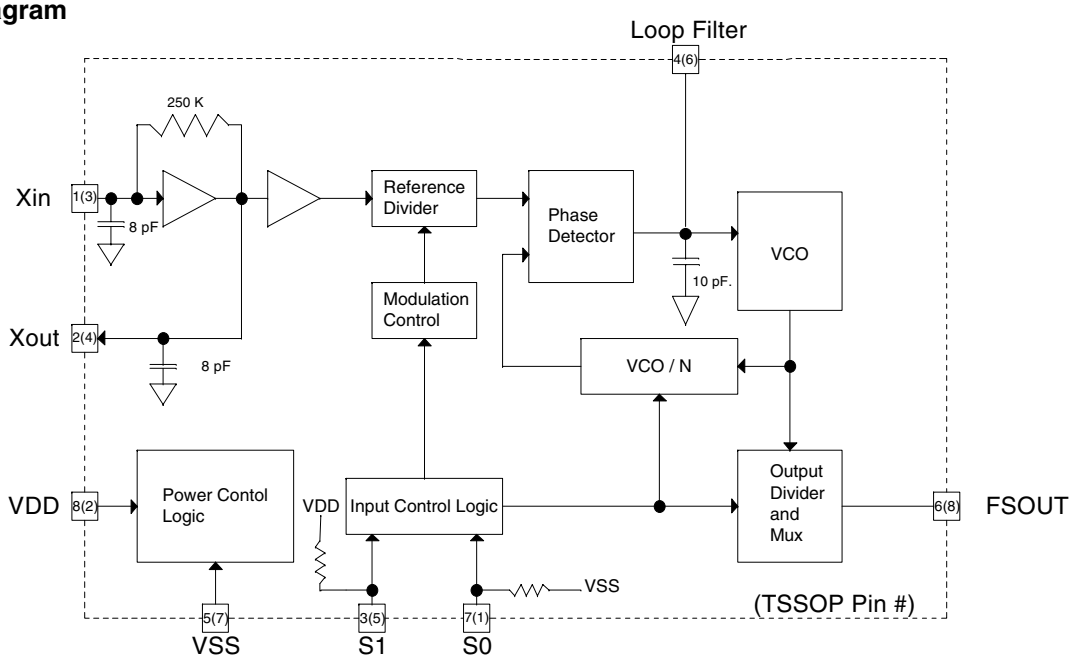
• Low EMI Clock IC

● Pin Assignment (Top View)



8 Pin SOIC Package

● Block Diagram



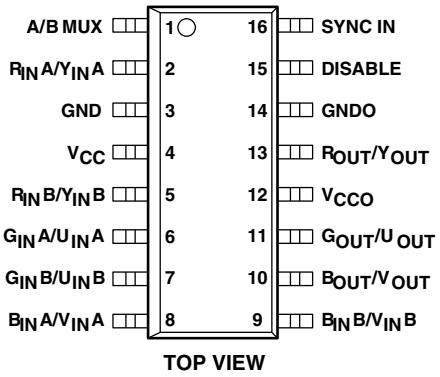
● Pin Function

Pin No.	Pin Name	I/O	TYPE	Description
1/2	Xin / Xout	I/O	Analog	Pins form an on-chip reference oscillator when connected to terminals of an external parallel resonant crystal. Xin may be connected to TTL/CMOS external clock source. If Xin connected to external clock other than crystal, leave Xout (pin 2) unconnected.
7/3	S0 / S1	I	CMOS/TTL	Digital control inputs to select input frequency range and output frequency scaling. Refer to Tables 7 & 8 for selection. S0 has internal pulldown. S1 has internal pullup.
4	LF	I	Analog	Loop Filter. Single ended tri-state output of the phase detector. A two-pole passive loop filter is connected to Loop Filter (LF).
6	FSOUT	O	CMOS/TTL	Modulated Clock Frequency Output. The center frequency is the same as the input reference frequency for FS781. Input frequency is multiplied by 2x and 4x for FS782 and FS784 respectively.
8	VDD	P	Power	Positive Power Supply.
5	VSS	P	Power	Power Supply Ground

■ ML6426CS-1 (RGB ASSY : IC4403)

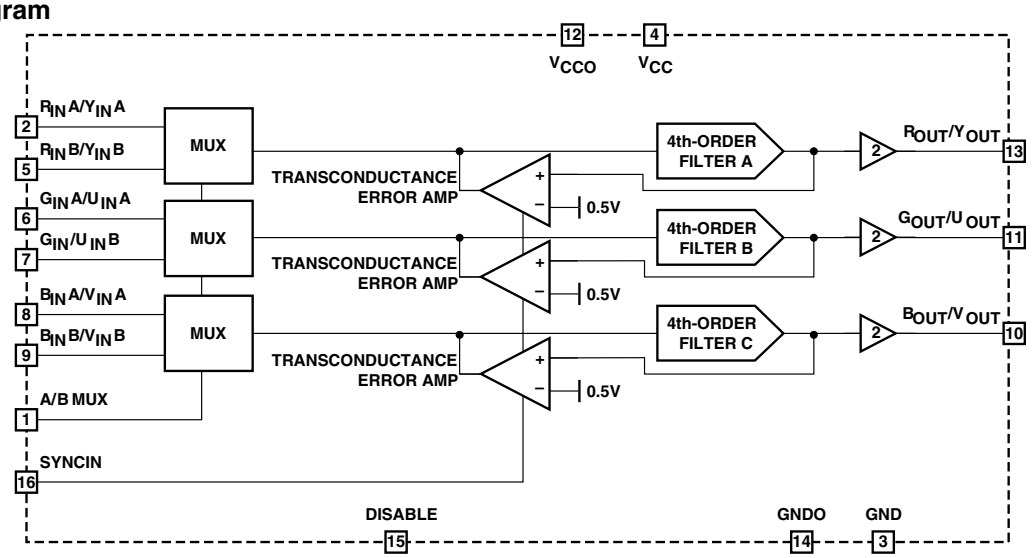
• LPF IC

● Pin Assignment (Top View)



TOP VIEW

● Block Diagram



● Pin Function

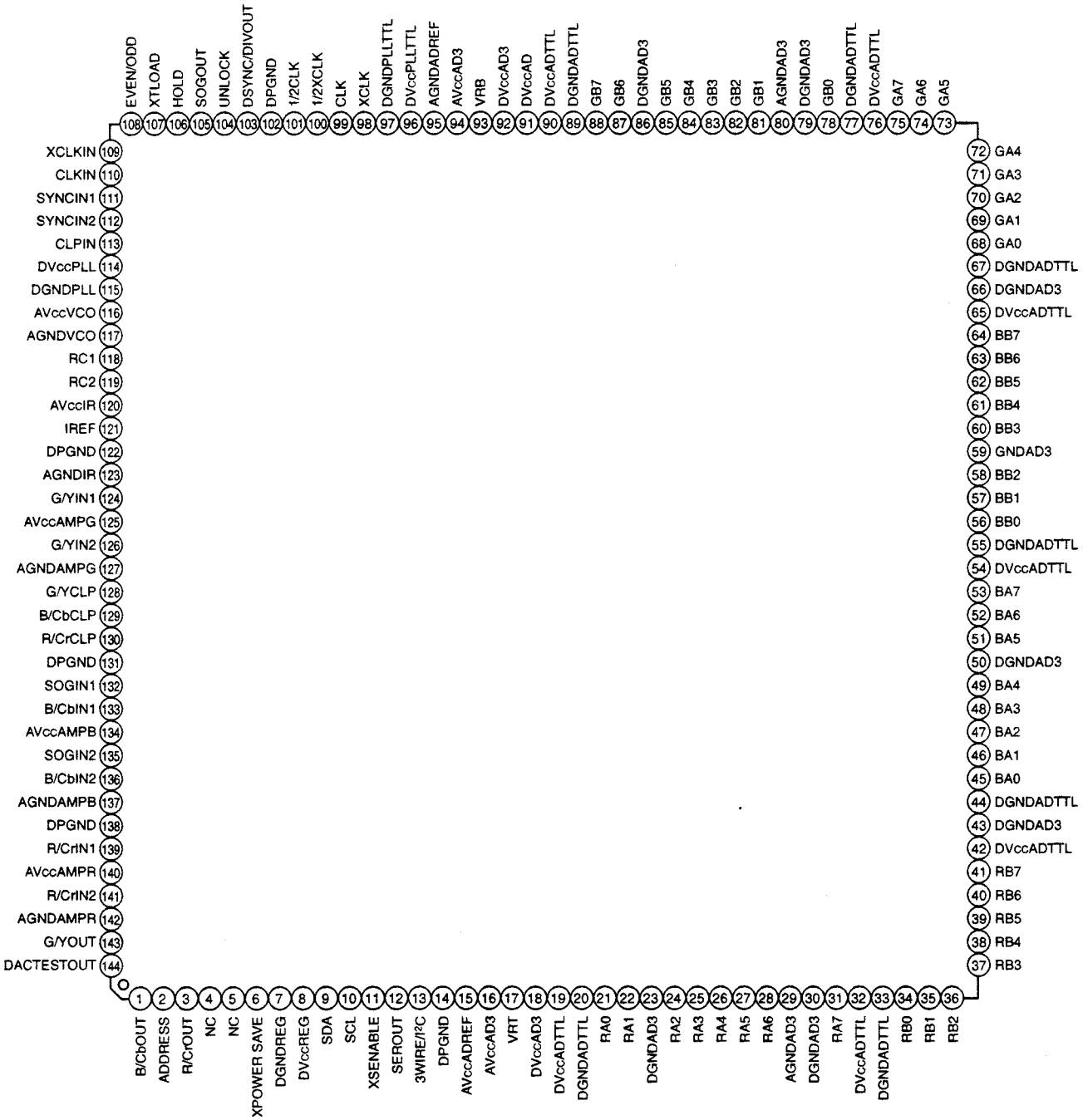
PIN	NAME	FUNCTION
1	A/B MUX	Logic input pin to select between Bank <A> and Bank <B> video inputs. This pin is internally pulled high.
2	$R_{IN}A/Y_{IN}A$	Unfiltered analog R- orY-channel input for Bank <A>. Sync must be provided at SYNC IN pin.
3	GND	Analog ground
4	V_{CC}	Analog 5V supply
5	$R_{IN}B/Y_{IN}B$	Unfiltered analog R- orY-channel input for Bank <B>. Sync must be provided at SYNC IN pin.
6	$G_{IN}A/U_{IN}A$	Unfiltered analog G- or U-channel input for Bank <A>. Sync must be provided at SYNC IN pin.
7	$G_{IN}B/U_{IN}B$	Unfiltered analog G- or U-channel input for Bank <B>. Sync must be provided at SYNC IN pin.

PIN	NAME	FUNCTION
8	$B_{IN}A/V_{IN}A$	Unfiltered analog B- orV-channel input for Bank <A>. Sync must be provided at SYNC IN pin.
9	$B_{IN}B/V_{IN}B$	Unfiltered analog B- orV-channel input for Bank <B>. Sync must be provided at SYNC IN pin.
10	B_{OUT}	Analog B orV-channel output
11	G_{OUT}	Analog G or U-channel output
12	V_{CCO}	5V power supply for output buffers
13	R_{OUT}	Analog R orY-channel output
14	GNDO	Analog ground
15	DISABLE	Disable/Enable pin.Turns the chip off when logic high. Internally pulled low.
16	SYNCIN	Input for an external H-sync logic signal for filter channels. CMOS level input. Active High.

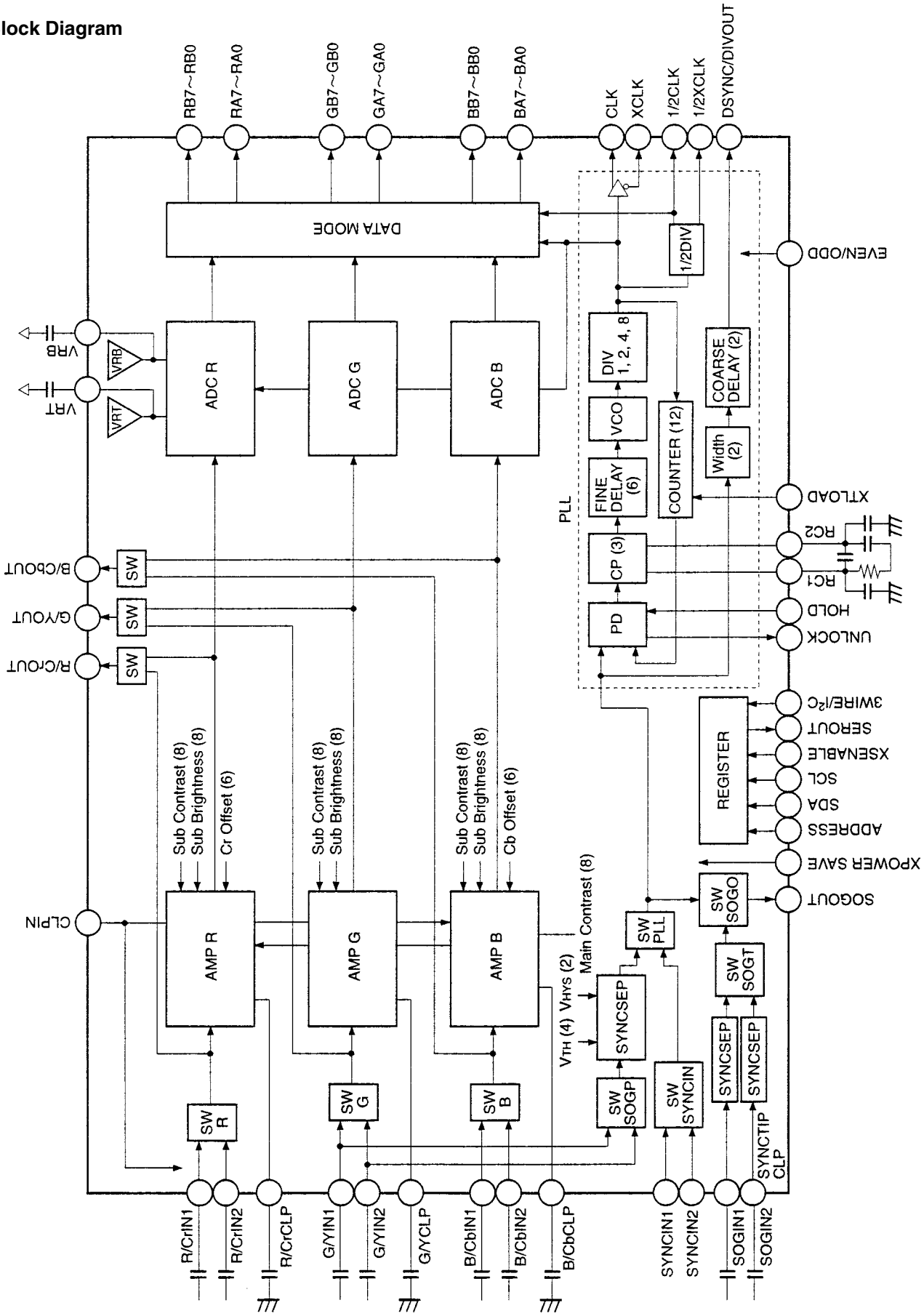
■ CXA3516R (RGB ASSY : IC4603)

- AD + PLL IC

- Pin Assignment (Top View)



● **Block Diagram**



● **Pin Function**

Pin No.	Symbol	I/O	Typical signal	Description
1	B/CbOUT	O	1.83V	Amplifier output signal monitor
2	ADDRESS	I	—	I^2C slave address setting
3	R/CrOUT	O	1.83V	Amplifier output signal monitor
4	NC	—	—	Not used
5	NC	—	—	Not used
6	XPOWER SAVE	I	TTL	Power save setting
7	DGNDREG	—	GND	Register GND
8	DVccREG	—	5V	Register power supply
9	SDA	I	—	Control register data input
10	SCL	I	—	Control register CLK input
11	XSENABLE	I	TTL	Enable signal input for 3-wire control register
12	SEROUT	O	TTL	3-wire control register data readout
13	3WIRE/I^2C	I	—	Selection of input between I^2C bus and 3-wire bus
15	AVccADREF	—	5V	Reference power supply for A/D converter
16, 94	AVccAD3	—	3.3V	Analog power supply for A/D converter
17	VRT	O	2.9V	Top reference voltage output for A/D converter
18, 92	DVccAD3	—	3.3V	Digital power supply for A/D converter
19, 32, 42, 54, 65, 76, 90	DVccADTTL	—	5V	TTL output power supply for A/D converter
20, 33, 44, 55, 67, 77, 89	DGNDADTTL	—	GND	TTL output GND for A/D converter
21, 22, 24 to 28, 31	RA0 to RA7	O	TTL	Data output for R-channel port A side
23, 30, 43, 50, 59, 66, 79, 86	DGNDAD3	—	GND	Digital GND for A/D converter
29, 80	AGNDAD3	—	GND	Analog GND for A/D converter
34 to 41	RB0 to RB7	O	TTL	Data output for R-channel port B side
45 to 49, 51 to 53	BA0 to BA7	O	TTL	Data output for B-channel port A side
56 to 58, 60 to 64	BB0 to BB7	O	TTL	Data output for B-channel port B side
68 to 75	GA0 to GA7	O	TTL	Data output for G-channel port A side
78, 81 to 85, 87, 88	GB0 to GB7	O	TTL	Data output for G-channel port B side
91	DVccAD	—	5V	Digital power supply for A/D converter
93	VRB	O	1.9V	Bottom reference voltage output for A/D converter
95	AGNDADREF	—	GND	Reference voltage GND for A/D converter

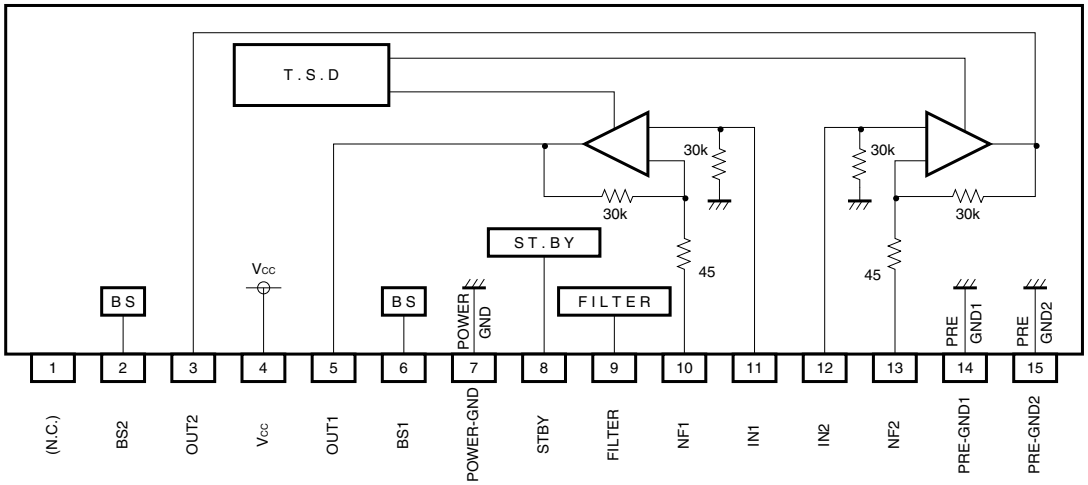
Pin No.	Symbol	I/O	Typical signal	Description
96	DVccPLLTTL	—	5V	TTL output power supply for PLL
97	DGNDPLLTTL	—	GND	TTL output GND for PLL
98	XCLK	O	TTL	Inverted CLK output
99	CLK	O	TTL	CLK output
100	1/2XCLK	O	TTL	Inverted 1/2CLK output
101	1/2CLK	O	TTL	1/2CLK output
103	DSYNC/ DIVOUT	O	TTL	DSYNC or DIVOUT signal output
104	UNLOCK	O	Open collector	Unlock signal output
105	SOGOUT	O	TTL	Output for SYNC ON GREEN
106	HOLD	I	TTL	Input for phase comparison disable signal
107	XTLOAD	I	TTL	Programmable counter reset setting
108	EVEN/ODD	I	TTL	Inverted pulse input of ADC sampling CLK
109	XCLKIN	I	PECL	Inverted CLK input for testing
110	CLKIN	I	PECL	CLK input for testing
111	SYNCIN1	I	TTL	Sync input 1
112	SYNCIN2	I	TTL	Sync input 2
113	CLPIN	I	TTL	Clamp pulse input
114	DVccPLL	—	5V	Digital power supply for PLL
115	DGNDPLL	—	GND	Digital GND for PLL
116	AVccVCO	—	5V	Analog power supply for PLL VCO
117	AGNDVCO	—	GND	Analog GND for PLL VCO
118	RC1	—	2.1V	External pin for PLL loop filter
119	RC2	—	2 to 4.5V	External pin for PLL loop filter
120	AVccIR	—	5V	Analog power supply for IREF
121	IREF	I	1.2V	Current setup
123	AGNDIR	—	GND	Analog GND for IREF
124	G/YIN1	I	—	G/Y signal input 1
125	AVccAMPG	—	5V	Power supply for G/Y amplifier block
126	G/YIN2	I	—	G/Y signal input 2
127	AGNDAMPG	—	GND	GND for G/Y amplifier block
128	G/YCLP	—	—	Clamp capacitor for brightness
129	B/CbCLP	—	—	Clamp capacitor for brightness
130	R/CrCLP	—	—	Clamp capacitor for brightness
132	SOGIN1	I	2.8V	SYNC ON GREEN signal input 1
133	B/CbIN1	I	—	B/Cb signal input 1

Pin No.	Symbol	I/O	Typical signal	Description
134	AVccAMPB	—	5V	Power supply for B/Cb amplifier block
135	SOGIN2	I	2.8V	SYNC ON GREEN signal input 2
136	B/CbIN2	I	—	B/Cb signal input 2
137	AGNDAMPB	—	GND	GND for B/Cb amplifier block
139	R/CrIN1	I	—	R/Cr signal input 1
140	AVccAMPR	—	5V	Power supply for R/Cr amplifier block
141	R/CrIN2	I	—	R/Cr signal input 2
142	AGNDAMPR	—	GND	GND for R/Cr amplifier block
143	G/YOUT	O	1.83V	Monitor pin for amplifier output signal
144	DAC TEST OUT	O	5V	DAC testing output for amplifier block control register
14, 102, 122, 131, 138	DPGND	—	GND	GND

■ BA5417 (MX AUDIO ASSY : IC8601)

- **Power Amp.**

● Block Diagram



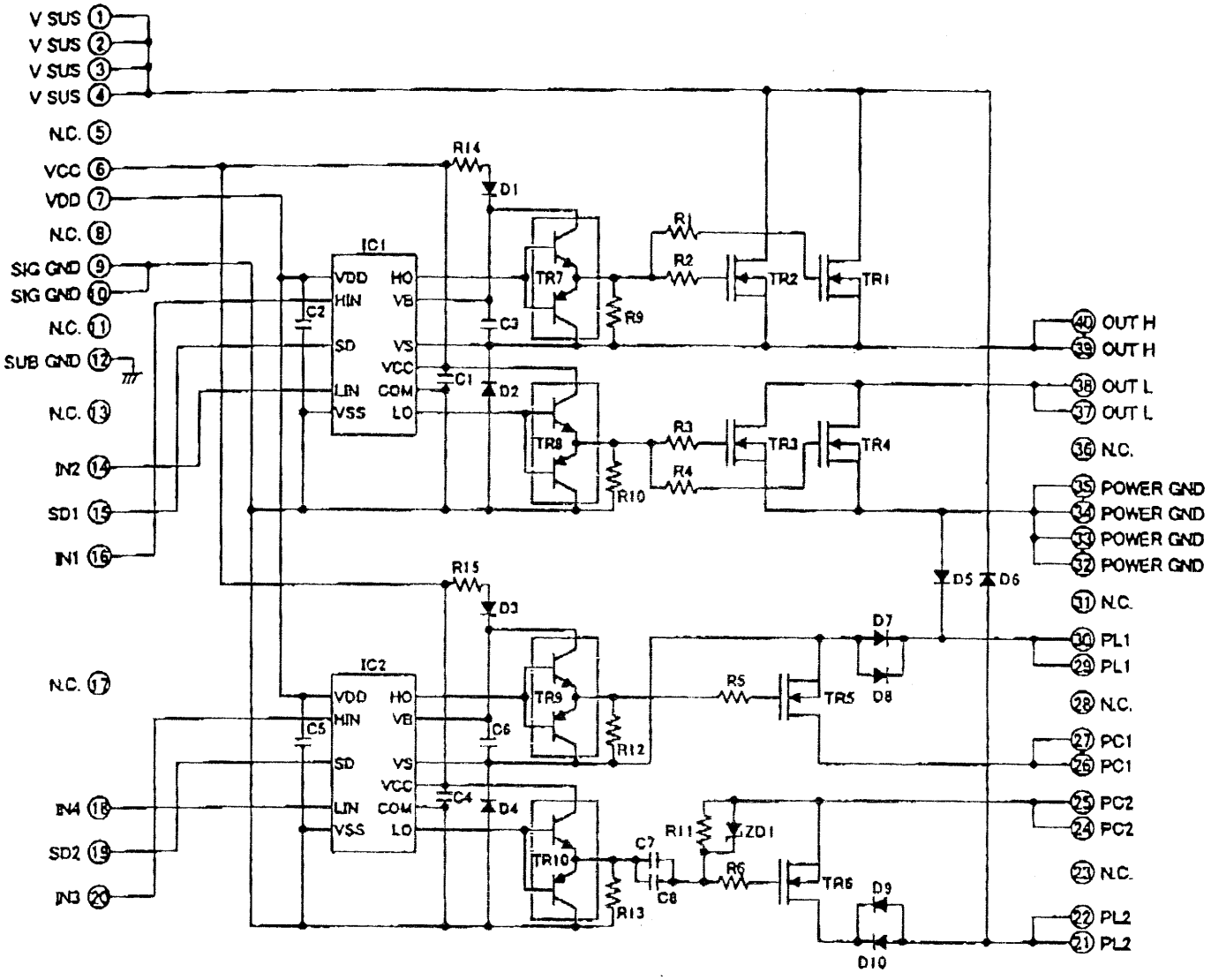
● Pin Function

Terminal No.	Name of terminal	Description
1	(NC)	−
2	BS2	Boot-strap terminal 2
3	OUT2	Output terminal 2
4	VCC	Power source terminal
5	OUT1	Output terminal 1
6	BS1	Boot-strap terminal 1
7	POWER−GND	Power GND
8	STBY	Stand-by control terminal
9	FILTER	Ripple filter terminal
10	NF1	Feedback terminal 1
11	IN1	Input terminal 1
12	IN2	Input terminal 2
13	NF2	Feedback terminal 2
14	PRE−GND1	Small signal GND 1
15	PRE−GND2	Small signal GND 2

■ STK795-460 (X DRIVE ASSY : IC3200, IC3201) (Y DRIVE ASSY : IC2206, IC2214)

- **PDP Pulse Module IC**

● Block Diagram



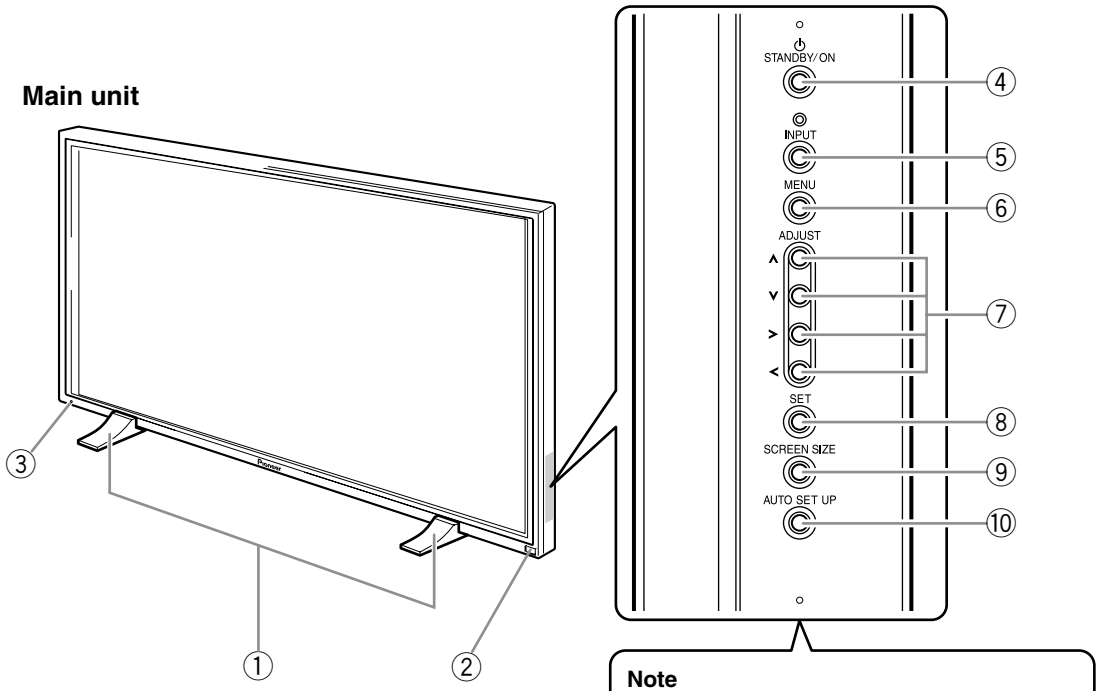
8. PANEL FACILITIES AND SPECIFICATIONS

8.1 PANEL FACILITIES

■ MAIN UNIT

Operation panel on the main unit

Main unit



Note
When optional speakers have been connected, the operation panel on the main unit will not be operable.

Main unit

① **Display stand**

② **Remote control sensor**
Point the remote control toward the remote sensor to operate the unit.

③ **STANDBY/ON indicator**
This indicator is red during standby mode, and turns to green when the unit is in the operation mode.
Flashes green when Power-Management function is operating.
The flashing pattern is also used to indicate error messages.

Operation panel on the main unit

④ **STANDBY/ON button**
Press to put the display in operation or standby mode.

⑤ **INPUT button**
Press to select input.

⑥ **MENU button**
Press to open and close the on-screen menu.

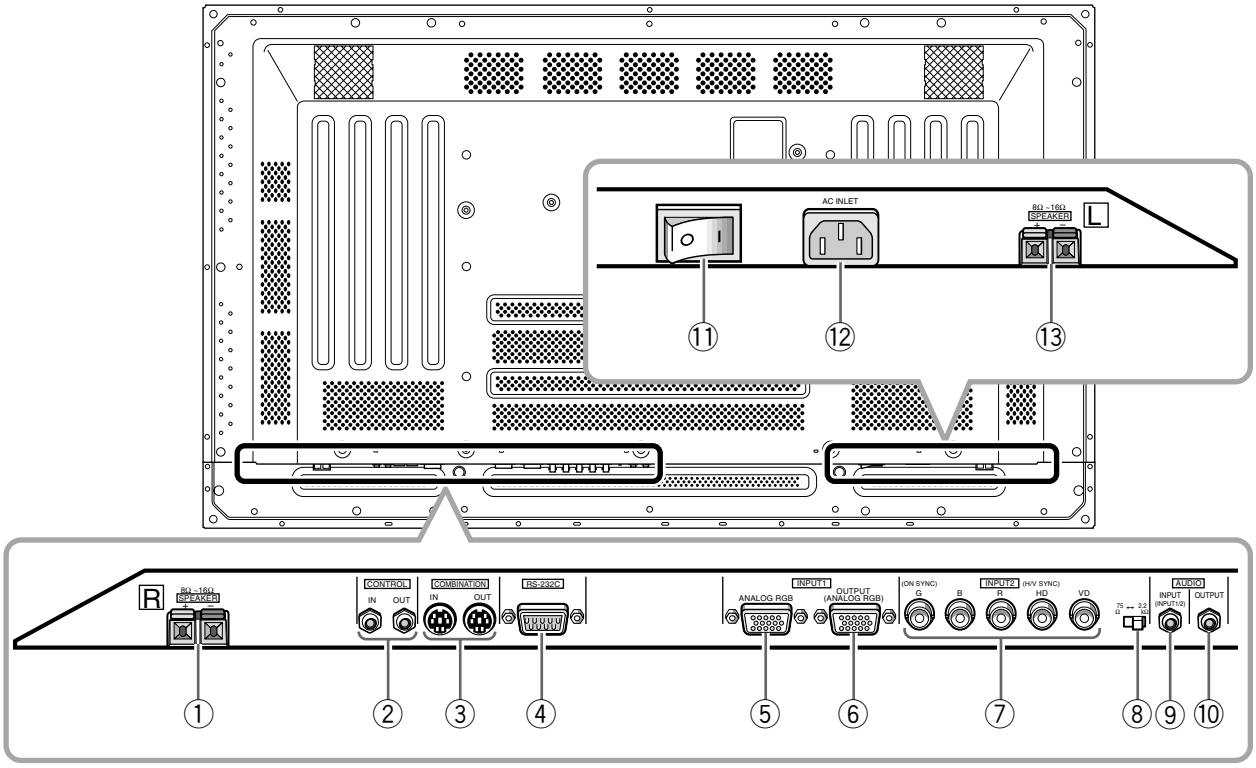
⑦ **ADJUST (▲/▼/►/◄) buttons**
Use to navigate menu screens and to adjust various settings on the unit.
Usage of cursor buttons within operations is clearly indicated in the on-screen display.

⑧ **SET button**
Press to adjust or enter various settings on the unit.

⑨ **SCREEN SIZE button**
Press to select the screen size.

⑩ **AUTO SET UP button**
When using computer signal input, automatically sets the POSITION and CLOCK/PHASE to optimum values.

CONNECTION PANEL



Plasma Display [PDP-433CMX/PDP-433MXE] Section

The plasma display is provided with 2 video input connectors, 1 video output connector, audio input/output jacks and speaker terminals.
There are also CONTROL IN/OUT jacks for connection of PIONEER components with the SR mark.
When this video card is installed on a plasma display, an additional three sets of video input connectors are provided (total five), together with one additional video output connector (total two).

① **SPEAKER (R) terminal**
For connection of an external right speaker.
Connect a speaker whose impedance is 8 -16 Ω.

② **CONTROL IN/OUT (monaural mini jacks)**
For connection of PIONEER components that bear the SR mark. Making CONTROL connection enables control of the plasma display as a component in a system.

③ **COMBINATION IN/OUT**
DO NOT MAKE ANY CONNECTIONS TO THESE TERMINALS.
These terminals are used in the factory setup.

④ **RS-232C**
DO NOT MAKE ANY CONNECTIONS TO THIS TERMINAL.
This terminal is used in the factory setup.

⑤ **INPUT1 (mini D-sub 15 pin)**
For connection of components that have RGB or component output jacks such as a personal computer, DVD player, or external RGB decoder. Make sure that the connection made corresponds to the format of the signal output from the connected component.

⑥ **OUTPUT (INPUT1) (mini D-sub 15 pin)**
Use the OUTPUT (INPUT1) connector to output the video signal to an external monitor or other component.
Note: The video signal will not be output from the OUTPUT (INPUT1) connector when the main power of this display is off or in standby mode.

⑦ **INPUT2 (BNC jacks)**
For connection of components that have RGB or component output jacks such as a personal computer, DVD player, or external RGB decoder. Make sure that the connection made corresponds to the format of the signal output from the connected component.

⑧ **Synchronizing signal impedance selector switch**
Depending on the connections made at INPUT2, it may be necessary to set this switch to match the output impedance of the connected component's synchronization signal.
When the output impedance of the component's synchronization signal is above 75 Ω, set this switch to the 2.2 kΩ position.

⑨ **AUDIO INPUT (Stereo mini jack)**
Use to obtain sound when INPUT1, INPUT2 or INPUT5 is selected.
Connect this jack to the audio output connector of the device connected to the plasma display's INPUT1 or INPUT2, or to the audio output connector of the device connected to the video card's INPUT5.

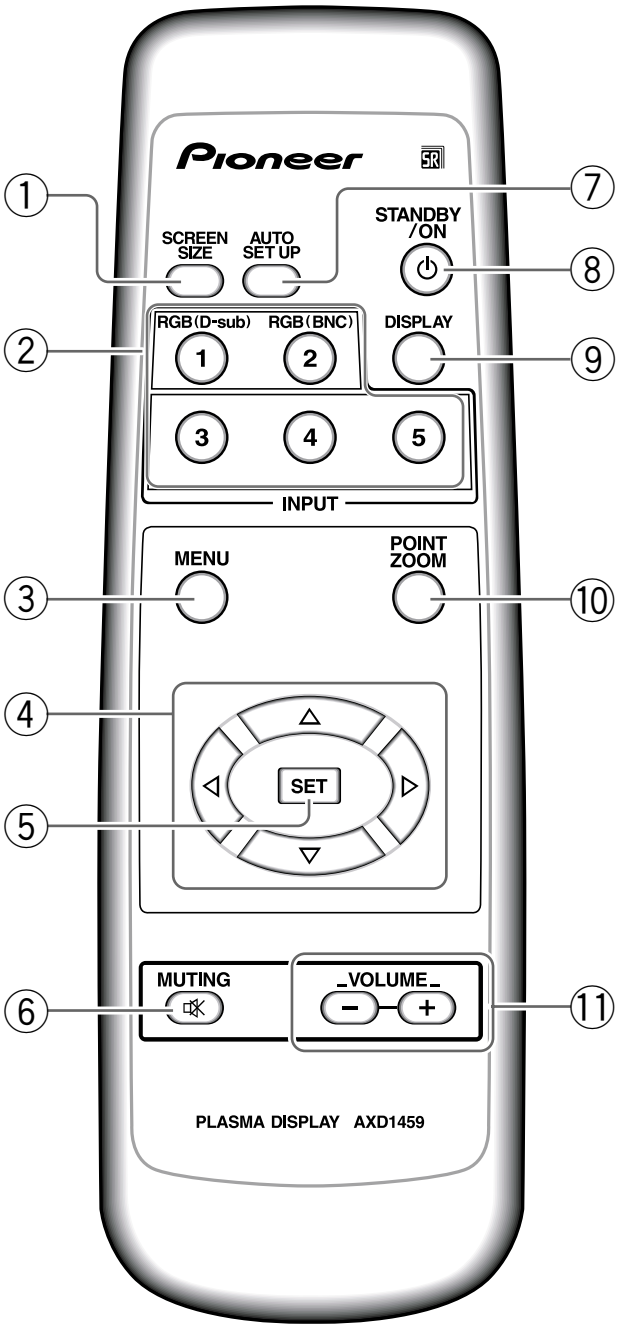
⑩ **AUDIO OUTPUT (Stereo mini jack)**
Use to output the audio of the selected source component connected to the plasma display to an AV amplifier or similar component.

⑪ **MAIN POWER switch**
Use to switch the main power of the plasma display on and off.

⑫ **AC INLET**
A power cable is furnished with the plasma display; connect one end of the power cable to this connector, and the other end to a standard AC power source.

⑬ **SPEAKER (L) terminal**
For connection of an external left speaker. Connect a speaker that has an impedance of 8 -16 Ω.

REMOTE CONTROL UNIT



① **SCREEN SIZE button**
Press to select the screen size.

② **INPUT buttons**
Use to select the input.

③ **MENU button**
Press to open and close the on-screen menu.

④ **ADJUST (▲/▼/►/◄) buttons**
Use to navigate menu screens and to adjust various settings on the unit.
Usage of cursor buttons within operations is clearly indicated at the bottom the on-screen menu display.

⑤ **SET button**
Press to adjust or enter various settings on the unit.

⑥ **MUTING button**
Press to mute the volume.

⑦ **AUTO SET UP button**
When using computer signal input, automatically sets the POSITION and CLOCK/ PHASE to optimum values.

⑧ **STANDBY/ON button**
Press to put the unit in operation or standby mode.

⑨ **DISPLAY button**
Press to view the unit's current input and setup mode.

⑩ **POINT ZOOM button**
Use to select and enlarge one part of the screen.

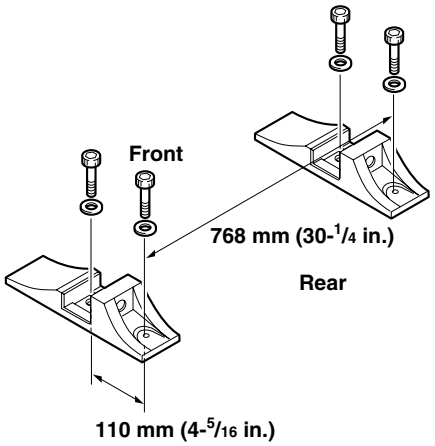
⑪ **VOLUME (+/–) buttons**
Use to adjust the volume.

INSTALLATION OF THE UNIT

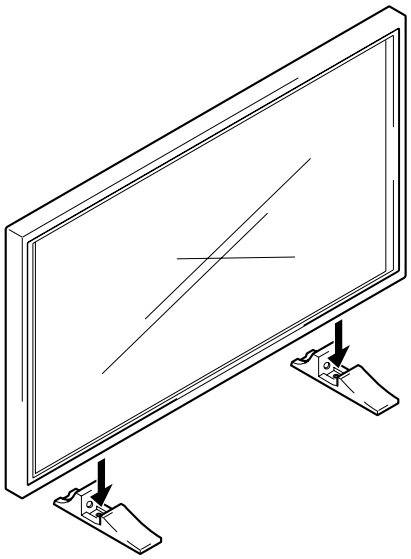
Installation using the supplied display stand

Be sure to fix the supplied stand to the installation surface. Use commercially available M8 bolts that are 25 mm longer than the thickness of the installation surface.

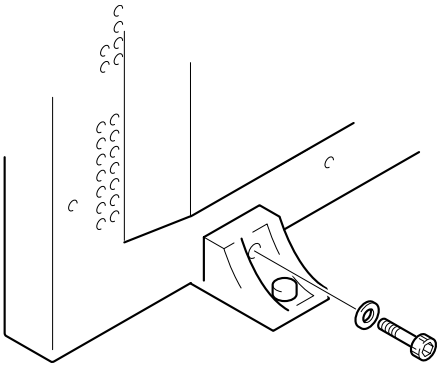
1 Fix the supplied stand to the installation surface at each of the 4 prepared holes using commercially available M8 bolts .



2 Set this unit in the stand.



3 Fix this unit using the supplied washer and bolt.



Use a 6 mm hex wrench to bolt them.

⚠ CAUTION

Because this unit weighs about 88 lbs 3 oz (about 30 kg) and the lack of depth makes it fairly unstable, please use 2 people or more when packing, carrying or installing.

Installation using the optional PIONEER stand or installation bracket

- Please be sure to request installation or mounting of this unit or the installation bracket by an installation specialist or the dealer where purchased.
- When installing, be sure to use the bolts provided with the stand or installation bracket.
- For details concerning installation, please refer to the instruction manual provided with the stand or installation bracket.

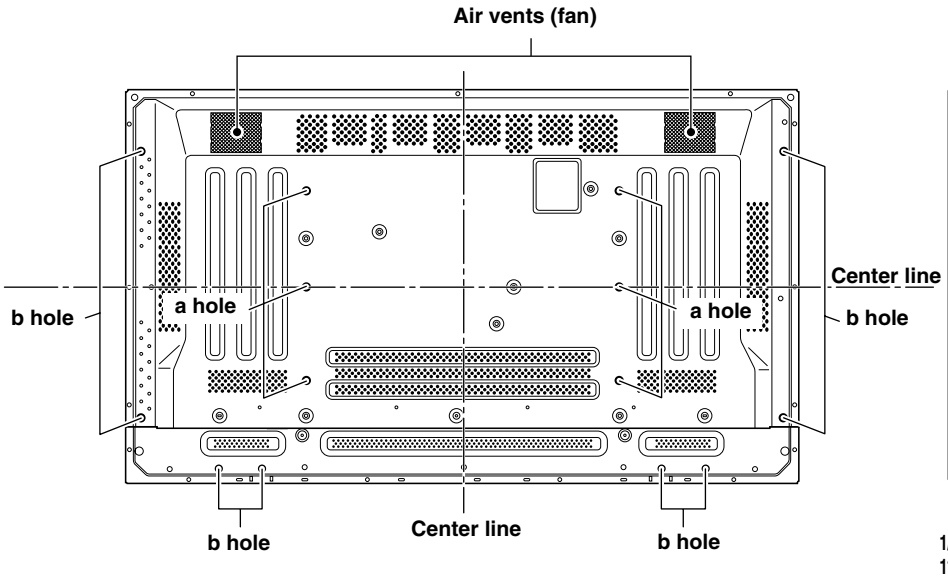
Installation using accessories other than the PIONEER stand or installation bracket (sold separately)

- When possible, please install using parts and accessories manufactured by PIONEER. PIONEER will not he held responsible for accident or damage caused by the use of parts and accessories manufactured by other companies.
- For custom installation, please consult the dealer where the unit was purchased, or a qualified installer.

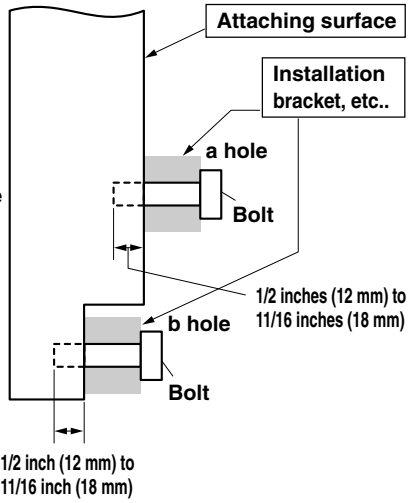
Wall-mount installation of the unit

This unit has been designed with bolt holes for wall-mount installation, etc.. The installation holes that can be used are shown in the diagram below.

- Be sure to attach in 4 or more locations above and below, left and right of the center line.
- Use bolts that are long enough to be inserted 1/2 inch (12 mm) to 11/16 inch (18 mm) into the main unit from the attaching surface for both a holes and b holes. Refer to the side view diagram below.
- As this unit is constructed with glass, be sure to install it on a flat, unwarped surface.



Rear view diagram



Side view diagram

CAUTION

To avoid malfunction, overheating of this unit, and possible fire hazard, make sure that the vents on the main unit are not blocked when installing. Also, as hot air is expelled from the air vents, be careful of deterioration and dirt build up on rear surface wall, etc..

CAUTION

Please be sure to use an M8 (Pitch = 1.25 mm) bolt. (Only this size bolt can be used.)

CAUTION

Because this unit weighs about 88 lbs 3 oz (about 40 kg) and the lack of depth makes it fairly unstable, please use 2 people or more when packing, carrying or installing.

CAUTION

This unit incorporates a thin design. To ensure safety if vibrated or shaken, please be sure to take measures to prevent the unit from tipping over.